

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

## APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

|  |  |  |   |  |
|--|--|--|---|--|
| 1a. TYPE OF WORK<br><b>DRILL</b> <input checked="" type="checkbox"/> <b>DEEPEN</b> <input type="checkbox"/> <b>PLUG BACK</b> <input type="checkbox"/>  |  |  | 5. LEASE DESIGNATION AND SERIAL NO.<br>U-46954                        |  |
| b. TYPE OF WELL<br>OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/> SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/> |  |  | 6. IF INDIAN, ALLOTTEE OR TRIBE NAME                                  |  |
| 2. NAME OF OPERATOR<br>Phillips Petroleum Company  |  |  | 7. UNIT AGREEMENT NAME  |  |
| 3. ADDRESS OF OPERATOR<br>P.O. Box 2920, Casper, WY 82602  |  |  | 8. FARM OR LEASE NAME<br>North Flodine Federal                        |  |
| 4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)*<br>At surface<br>660' FNL, 1780' FWL (NENW)<br>At proposed prod. zone<br>Same                                  |  |  | 9. WELL NO.<br>1-25   |  |
| 14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*<br>17 Miles N. Aneth, Utah   |  |  | 10. FIELD AND POOL, OR WILDCAT<br>✓ Wildcat                           |  |
| 15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)<br>660   |  |  | 11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA<br>Sec. 25-T39S-R25E |  |
| 16. NO. OF ACRES IN LEASE<br>640   |  |  | 12. COUNTY OR PARISH<br>San Juan                                      |  |
| 17. NO. OF ACRES ASSIGNED TO THIS WELL<br>40   |  |  | 13. STATE<br>Utah   |  |
| 18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.<br>N/A   |  |  | 20. ROTARY OR CABLE TOOLS<br>Rotary                                   |  |
| 21. ELEVATIONS (Show whether DF, RT, GR, etc.)<br>5255' GR   |  |  | 22. APPROX. DATE WORK WILL START*<br>Immediately Upon Approval        |  |

## PROPOSED CASING AND CEMENTING PROGRAM

| SIZE OF HOLE | SIZE OF CASING | WEIGHT PER FOOT | SETTING DEPTH | QUANTITY OF CEMENT          |
|--------------|----------------|-----------------|---------------|-----------------------------|
| 20"          | 13-3/8"        | 40# H-40 STC    | 100'          | 150 sx circ to surface      |
| 12-1/4"      | 9-5/8"         | 36# K-55 STC    | 2000'         | 1000 sx circ to surface     |
| 8-3/4"       | 5-1/2"         | 15.5# K-55 STC  | 6150'         | to be determined, TOC 2000' |

Phillips Petroleum Company proposes to drill a 6150 ft. exploratory well to the Akah Formation. Blow out preventers will be operated daily and tested weekly.

cc: O+3 BLM - Moab, Utah

1 G.W. Berk  
1 P.J. Konkle  
1 R. Ewing  
2 Utah DOGM  
1 J.R. Reno  
1 R.C. Taylor

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IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. SIGNED D.C. Gill D.C. Gill TITLE Area Manager DATE 11-06-87

(This space for Federal or State office use)

PERMIT NO. 43-037-31369

APPROVAL DATE

APPROVED BY THE STATE  
OF UTAH DIVISION OF  
OIL, GAS, AND MINING

APPROVED BY  
CONDITIONS OF APPROVAL, IF ANY:

TITLE

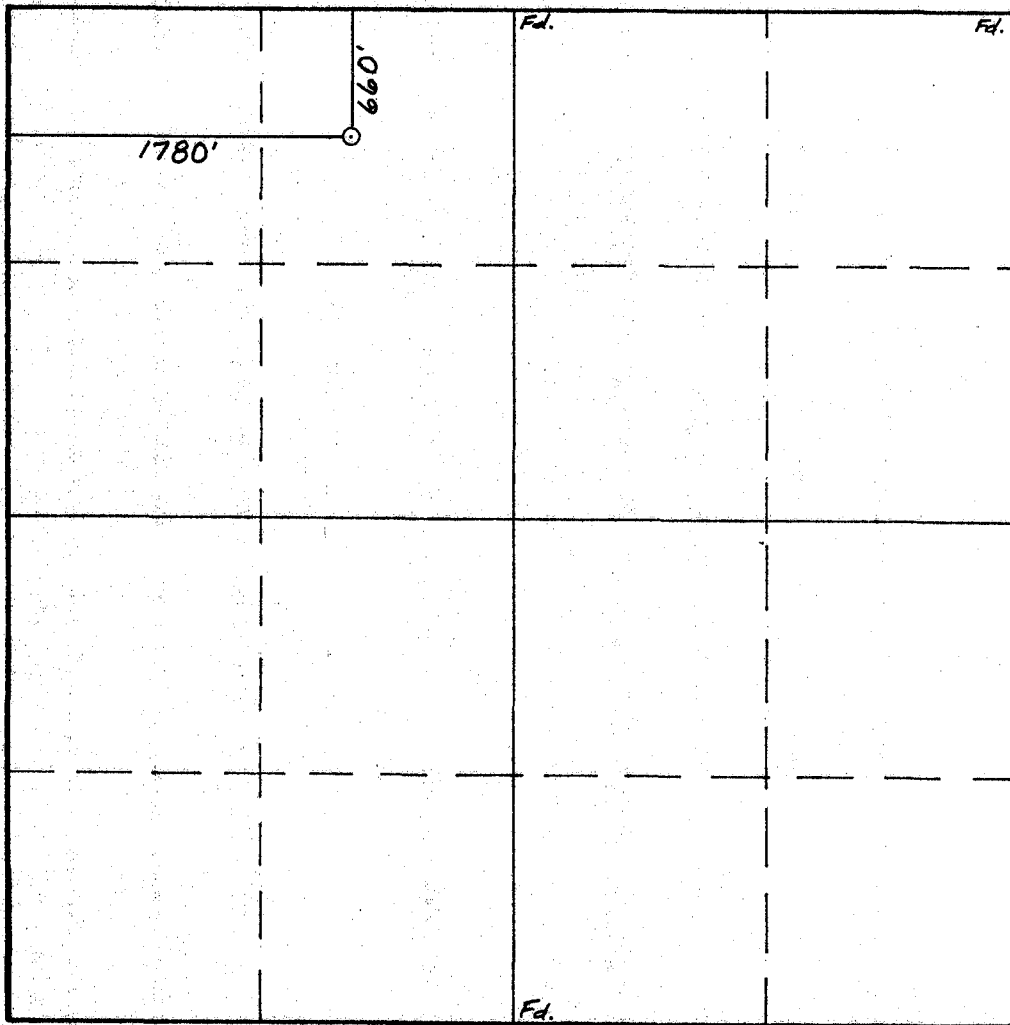
DATE 12-8-87  
BY John R. Bay  
WELL SPACING: R65-3-2

\*See Instructions On Reverse Side

COMPANY PHILLIPS PETROLEUM COMPANY  
LEASE NORTH FLODINE FEDERAL WELL NO. 1-25  
SEC. 25, T. 39 S, R. 25 E  
COUNTY San Juan STATE Utah  
LOCATION 660' FNL & 1780' FWL  
ELEVATION 5230

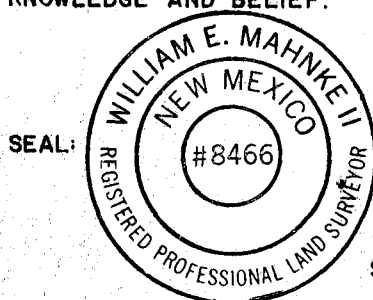
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SCALE: 1" = 1000'

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD  
NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION  
AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY  
KNOWLEDGE AND BELIEF.



*W. E. Mahnke II*  
WILLIAM E. MAHNKE II  
NEW MEXICO P.L.S. NO 8466

SURVEYED Nov. 7, 1987

NORTH FLODINE FEDERAL 1-25  
PHILLIPS PETROLEUM COMPANY

NENW SEC. 25-T39S-R25E  
SAN JUAN COUNTY, UTAH

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Supplement to Form 3160-3 "Application for Permit to Drill, Deepen or Plugback".

DRILLING PROGRAM

1. Surface Formation is Jurassic Morrison. Estimated tops of geological markers:

|         |        |           |        |              |        |
|---------|--------|-----------|--------|--------------|--------|
| Entrada | 1,030' | Chinle    | 1,900' | Upper Ismay  | 5,725' |
| Carmel  | 1,090' | Shinarump | 2,785' | Lower Ismay  | 5,870' |
| Navajo  | 1,125' | Moenkopi  | 2,855' | Desert Creek | 5,950' |
| Kayenta | 1,525' | DeChelly  | 2,975' | Akah         | 6,070' |
| Wingate | 1,625' | Hermosa   | 4,795' |              |        |

2. Top and bottom depths at which water, oil, gas, salt, uranium, coal and other mineral bearing formations are expected.

Water Bearing Formations:

|                         |        |
|-------------------------|--------|
| Top Navajo Sandstone    | 1,125' |
| Top Shinarump Sandstone | 2,785' |
| DeChelly (Top Cutler)   | 2,975' |

Oil Bearing Formations:

|                  |        |
|------------------|--------|
| Top Upper Ismay  | 5,725' |
| Top Lower Ismay  | 5,870' |
| Top Desert Creek | 5,950' |

Salt Formation:

|               |        |
|---------------|--------|
| Top Akah Salt | 6,070' |
|---------------|--------|

3. Blow-out prevention equipment will be 11" 3000 psi equipment, tested initially to 3000 psi (2000 psi for annular), inspected and operated daily and pressure tested weekly to 1500 psi. Weekly pressure tests will be supervised by Phillips Representative and the drilling contractor's supervisors and recorded on the Daily Drilling Report which will remain on the rig floor during drilling operations. BOP tests will be conducted in accordance with Phillips Petroleum Company's Well Control Manual.

4a. Casing and Cementing Program:

Proposed casing program: All oil and gas productive zones will be covered with cement and casing tested as detailed below:

Conductor Casing: Hole size 20", 100' 13-3/8" 48#/ft H-40 STC new casing. Conductor will be cemented with 150 sx Class "B" cement. Cement will be circulated to surface.

Surface Casing: Hole size 12-1/4", 2000' 9-5/8" 36# K-55 STC new casing. Surface casing will be tested to 1500 psi before drilling out. Surface casing will be cemented with 800 sx 50/50 Pozmix/Class "B" cement followed with 200 sx Class "B" cement. Cement will be circulated to the surface.

Production Casing: Hole size 8-3/4", 6150' 5-1/2" 15.5# K-55 STC new casing. Production casing will be tested to 1500 psi. Production casing will be cemented with 50/50 Pozmix/Class "B" followed with Class "B" cement. For cement volumes, the caliper log will be used with 20% excess cement requirements to bring cement to 2000'.

4b. Auxiliary Equipment to be Used:

Kelly Cocks - Upper and Lower  
Bit Floats - N/A  
Mud Monitoring Equipment - Pit level indicator (mud flow sensor)  
Drill String Safety Valves - will be available on drill floor at all times to fit any section of tubing or drill pipe being handled.

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5. Drilling Fluids:

Drilling fluid will be a fresh water based mud system. Spud mud is gel and water with a weight of 8.4 - 8.8 ppg. From the surface to approximately 2000', gel and water will be used. Mud weight may be up to 9 ppg to control water flow from the Wingate Formation. A drilling fluid of 8.6 - 9.5 ppg 32-38 viscosity and less than 15cc/30 min water loss will be used from 2000' - 5900'. Mud weight may be increased to 10.4 ppg if a water flow is encountered. From 5900' to Total Depth, mud properties will be 10.5 - 12.5 ppg, 40 - 45 viscosity and below 10cc water loss.

Adequate inventories of mud materials will be stored on location to build a mud volume equal to the active system on the rig.

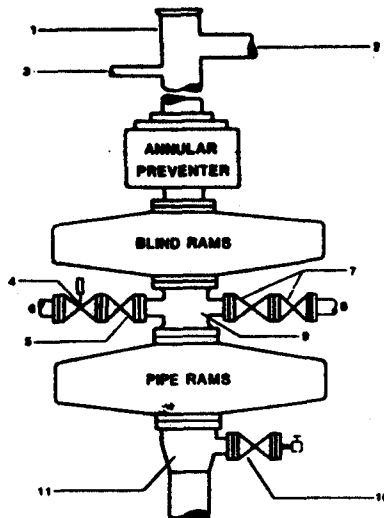
6. Testing, Logging, Coring Program:

The Logging Program will consist of 4 runs.

- |   |                           |
|---|---------------------------|
| 1. DLL, MSFL, SP, GR Caliper, BHC Sonic | From TD to Surface Casing |
| 2. LDT/CNL, GR, Caliper                 | From TD to Surface Casing |
| 3. BHC Sonic, GR, Caliper               | From TD to Surface Casing |
| 4. Dipmeter                             | From TD to Surface Casing |

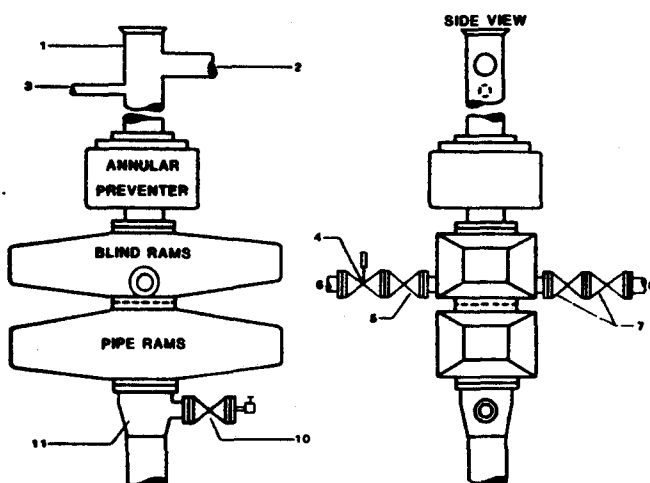
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1. BELL NIPPLE
2. FLOW LINE
3. FILL-UP LINE
4. 3" FE PRESSURE-OPERATED CHOKE LINE VALVE
5. 3" FE GATE VALVE
6. 3" FE CHOKE LINE TO CHOKE MANIFOLD
7. 2" FE GATE VALVES
8. 2" FE KILL LINE
9. DRILLING SPOOL
10. 2" SE OR FE GATE VALVE WITH NEEDLE VALVE
11. CASING HEAD HOUSING

Figure 7-7. Standard Hydraulic Blowout Preventer Assembly  
(3 M Working Pressure) Alternative 1



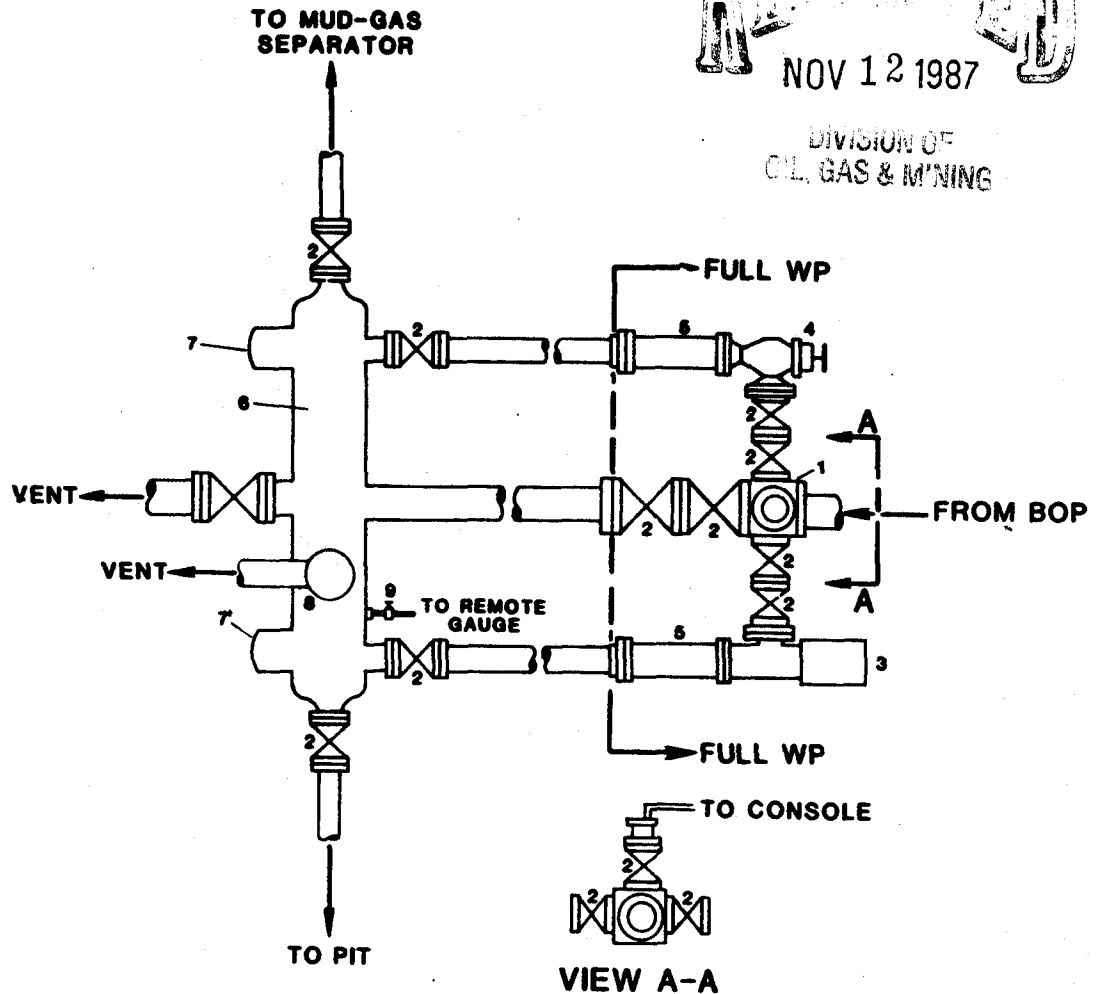
1. BELL NIPPLE
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7. 2" GATE VALVES
8. 2" FE KILL LINE
10. 2" SE OR FE GATE VALVE WITH NEEDLE VALVE
11. CASING HEAD HOUSING

Figure 7-8. Standard Hydraulic Blowout Preventer Assembly  
(3 M Working Pressure) Alternative 2 (without Drilling Spool)

# FIELD PRACTICES AND STANDARDS

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1. CROSS
2. GATE VALVE
3. REMOTELY CONTROLLED CHOKE
4. ADJUSTABLE CHOKE
5. EROSION NIPPLE
6. BUFFER CHAMBER
7. WELDED BULL PLUG, LEAD FILLED
8. RELIEF VALVE
9. NEEDLE VALVE

NOTE: ALL LINES MUST BE SECURELY ANCHORED

Figure 7-12. Example Choke Manifold Surface Blowout Preventers

6. Testing, Logging, Coring Program (Cont.):

Coring Program will be - 60' core of Upper Ismay

DST Program will be - 1) DST of Upper Ismay  
2) Possible DST of Desert Creek

A temperature or cement bond log will be run to determine cement top.

7. Downhole Conditions:

No abnormal temperatures or pressures are anticipated, no H<sub>2</sub>S is expected. Maximum bottom hole pressure of 3000 psi is expected.

8. Other Facets:

Spud date is expected immediately upon permit approval, early December, 1987. Anticipated drilling time is 20 days.

CULTURAL RESOURCES REPORT

Ia Plata Archaeological Consultants has completed a class III cultural resources inventory of the access road and well site. A copy of this report has been sent to your office.

SURFACE USE PROGRAM

1. Exiting Roads:

From Aneth, Utah proceed on N.5099 NW 7.5 miles to N.5069 (Hovenweep Road), turn north and continue for 7.5 miles to intersection with Hatch Trading Post (UT 213) road, turn west for 1.1 miles then south on well access road, continue 1/2 mile to location.

2. Access Roads to be Constructed or Reconstructed:

Approximately 1900 ft of existing two track road and 750 ft of new road will be flat bladed to location. One culvert will be installed where the new access comes south off the Hatch Trading Post road. Access is owned by the Federal Government.

3. Location of Existing Wells:

Within one mile of the proposed well there is one P&A'd well in SE 1/4 Sec. 24. There are no other wells in the immediate area.

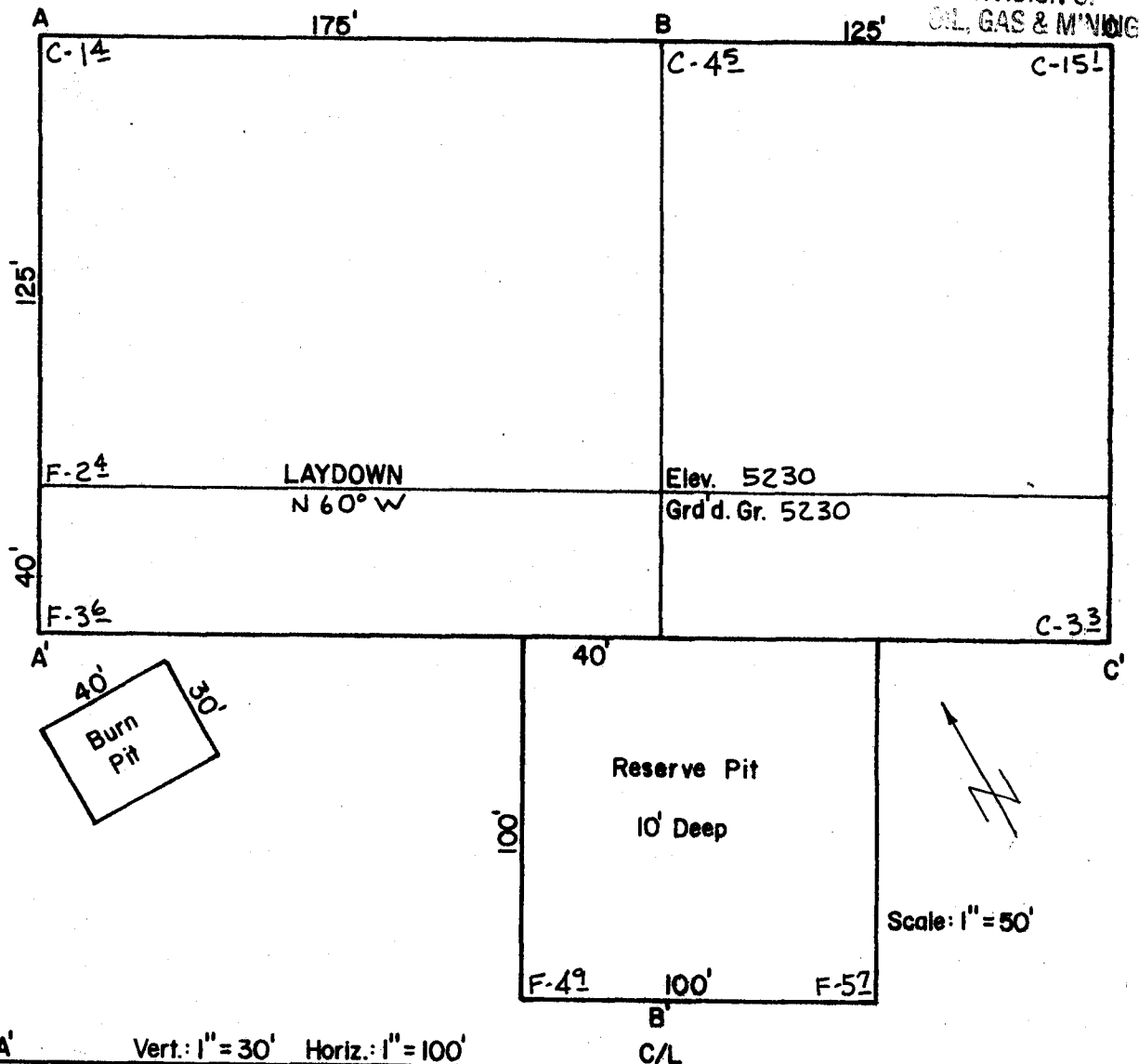
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PHILLIPS PETROLEUM COMPANY  
 #1-25 NORTH FLODINE FEDERAL  
 660'FNL & 1780'FWL  
 Sec.25, T39S, R25E  
 San Juan Co., Utah

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| A-A' | Vert.: 1" = 30' | Horiz.: 1" = 100' | C/L   |
|------|-----------------|-------------------|-------|
| 5240 | -----           | -----             | ----- |
| 5230 | -----           | -----             | ----- |
|      | -----           | -----             | ----- |

| B-B' | Vert.: 1" = 30' | Horiz.: 1" = 100' | C/L   |
|------|-----------------|-------------------|-------|
| 5240 | -----           | -----             | ----- |
| 5230 | -----           | -----             | ----- |
|      | -----           | -----             | ----- |

| C-C' | Vert.: 1" = 30' | Horiz.: 1" = 100' | C/L   |
|------|-----------------|-------------------|-------|
| 5240 | -----           | -----             | ----- |
| 5230 | -----           | -----             | ----- |
|      | -----           | -----             | ----- |



4. Location of Proposed Production Facilities:

(see attachment)

If the well is commercially productive production facilities will be constructed on location.

5. Water Supply:

- a. A water supply has not been determined at this time.
- b. Water will be trucked or piped to location.
- c. A water well will probably not be drilled.

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6. Construction Materials:

- a. Native soils will be used for the construction of the drill site and access road.
- b. The above materials will be purchased from a reputable contractor. The materials will not be federally owned.

7. Waste Disposal:

- a. Cuttings will be held in the reserve pit.
- b. Drilling fluids will be held in the reserve pit and allowed to evaporate following cessation of drilling and completion activities.
- c. Garbage and trash will be held in a windproofed pit and buried under four feet of fill.
- d. Salt is expected in this well, it will be disposed of in the reserve pit.
- e. Chemicals used in the well will be disposed of in the reserve pit.
- f. Sewage and graywater from the Phillips staff trailer will be held in a self contained system. Portable chemical toilets will also be available on location.
- g. Produced fluids from the well will be placed in tanks on location.

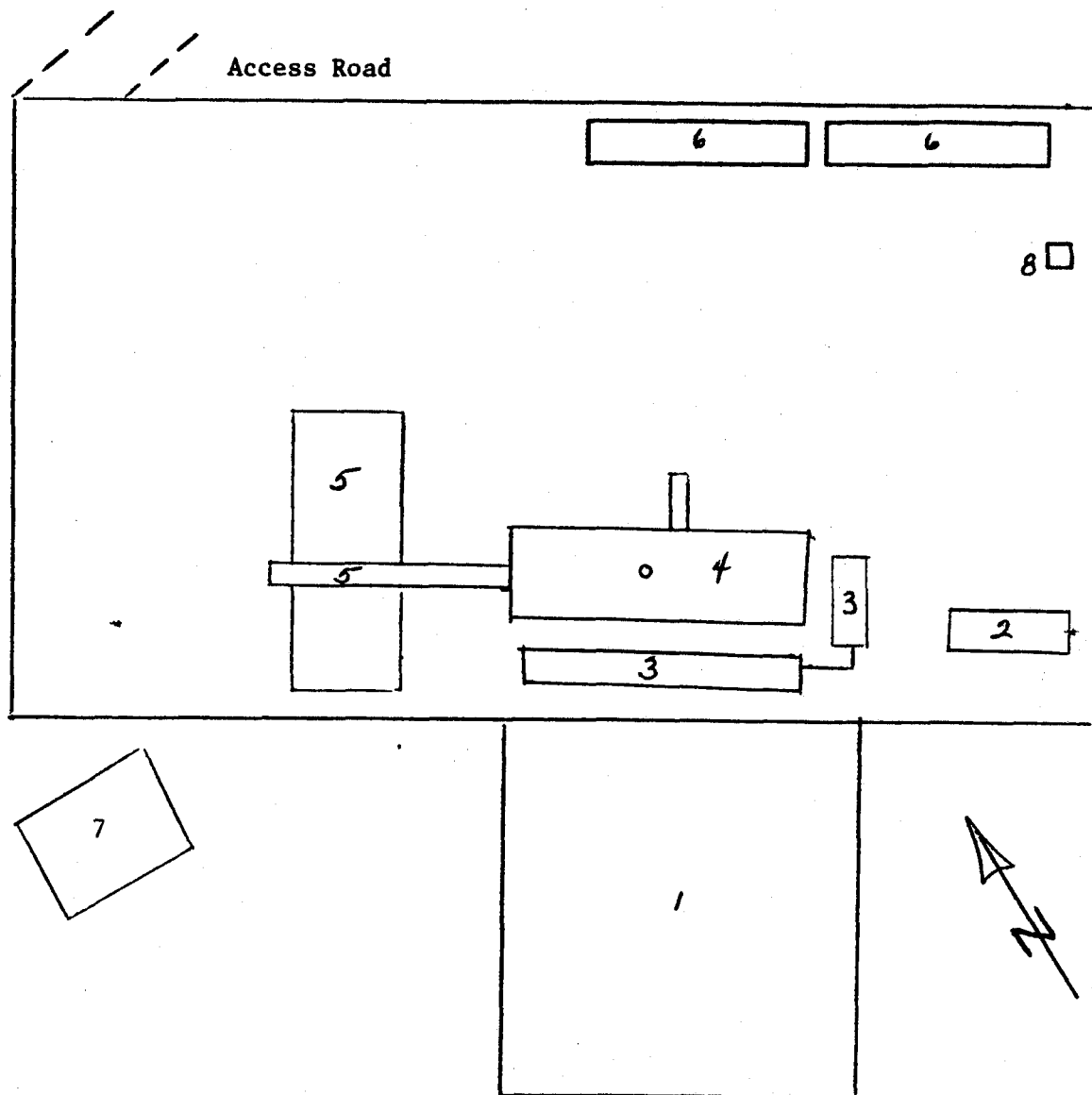
8. Ancillary Facilities:

- a. There will be no drilling camp on location, there will be two mobile housing units for Phillips drilling supervisors, geologists and another for the toolpusher. A self contained sewage and graywater system will be provided for these facilities.
- b. No airstrip will be needed.

9. Well Site Layout

- a. Refer to the attached rig layout plan.
- b. Lining of the reserve pit is not anticipated, if porous soils are encountered the pit will be lined.

# DRILLING RIG LAYOUT

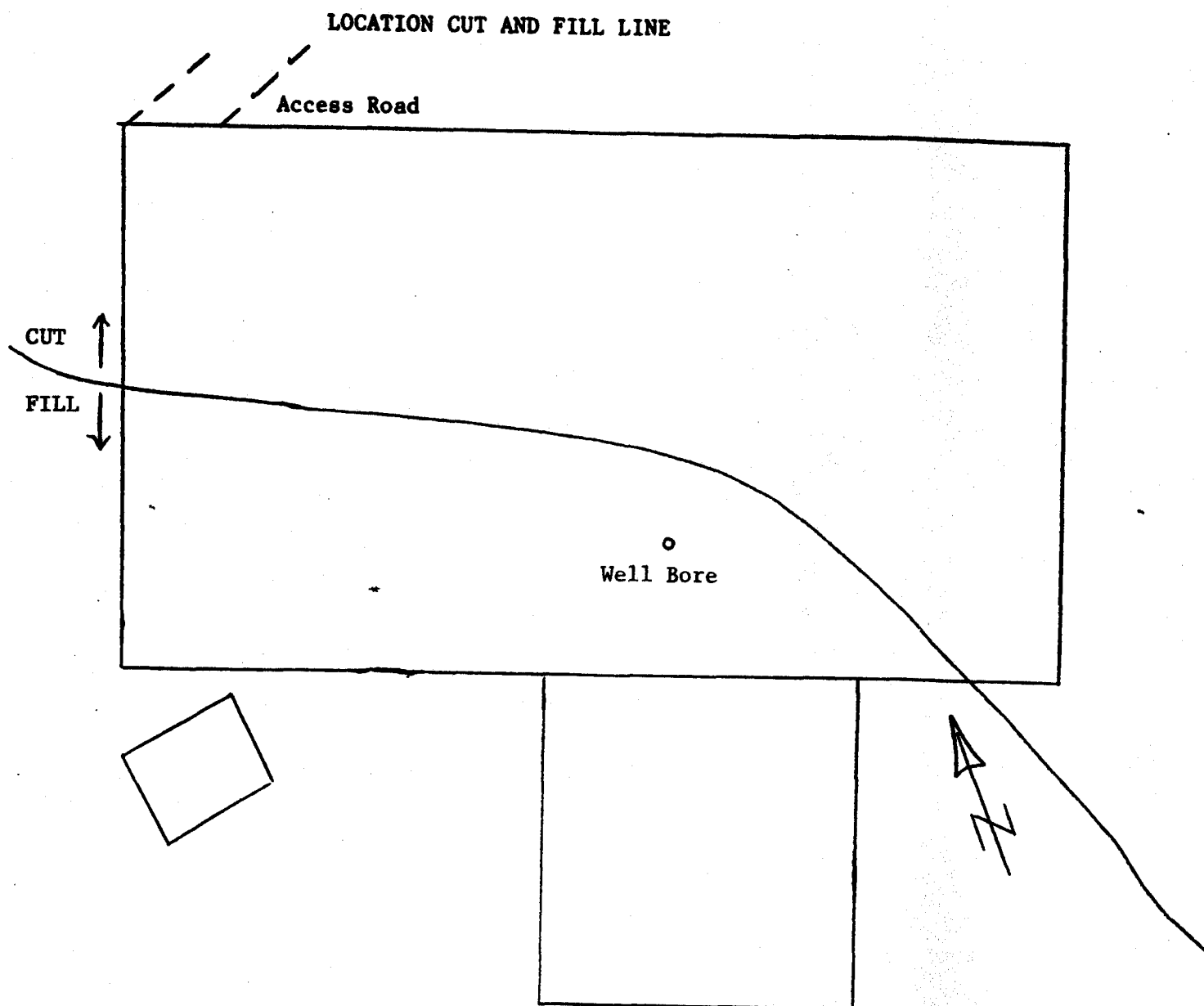


- 1-Reserve Pit
- 2-Trash Pit
- 3- Circulating Pits and Pump
- 4- Rig
- 5-Cat Walk and Pipe Racks
- 6-Trailers
- 7-Flare Pit
- 8-Portable Toilet

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PHILLIPS PETROLEUM COMPANY  
NORTH FLODINE FEDERAL 1-25  
NENW Sec 25- T39S-R25E  
San Juan County, Utah



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PHILLIPS PETROLEUM COMPANY  
NORTH FLODINE FEDERAL 1-25  
NE NW Sec. 25-T39S- R25E  
San Juan County, Utah

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10. Surface Reclamation Plan:

- a. Construction Program: The BLM will be notified prior to construction.
1. Six to eight inches of surface material will be stripped and stockpiled prior to construction. This soil will not be used for any propose except final rehabilitation of the disturbed area.
  2. See the cross sectional diagram of the location for construction specifics.
  3. All temporary disturbances will be restored to their original contour.
  4. Trees will be stockpiled separately of topsoil.
- b. Well Abandonment: The disturbed areas will be recontoured to the original topography. No unnatural depressions will be left that may collect water. The stockpiled topsoil will be distributed evenly over the area. The area will be reclaimed and seeded in accordance with BLM specifications.
- c. Producing Well: Those areas not needed for production purposes will be recontoured to the surrounding topography. Topsoil will be evenly distributed over areas not needed for production. These areas will be seeded per BLM specifications. The production facilities will be placed on cut per the attached diagram. Dikes large enough to contain the capacity of the largest tank will be built around the production facilities.
- d. Pipelines and flowlines needed for a producing well will be buried.
- e. Rehabilitation will begin the fall following the completion of drilling activities depending on weather conditions and the pit evaporation rate.

11. Surface Ownership:

The well site and access road are on property owned by the Federal Government.

12. Other Information:

- a. The well site has been moved as far as possible to avoid archeological finds.
- b. The well site is visible to visitors to Hovenweep National Monument.
- c. Access will cross the Mobil CO<sub>2</sub> line, no cuts will be made, additional fill may be added to "pad" the pipeline crossing.

13. Operator's Representative and Certification:

D.C. Gill  
Area Manager  
Phillips Petroleum Company  
P.O. Box 2920  
Casper, Wyoming 82602  
(307) 237-3791

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exist, that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with operations proposed herein will be performed by Phillips Petroleum Company and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of false statement.



D.C. Gill  
Area Manager

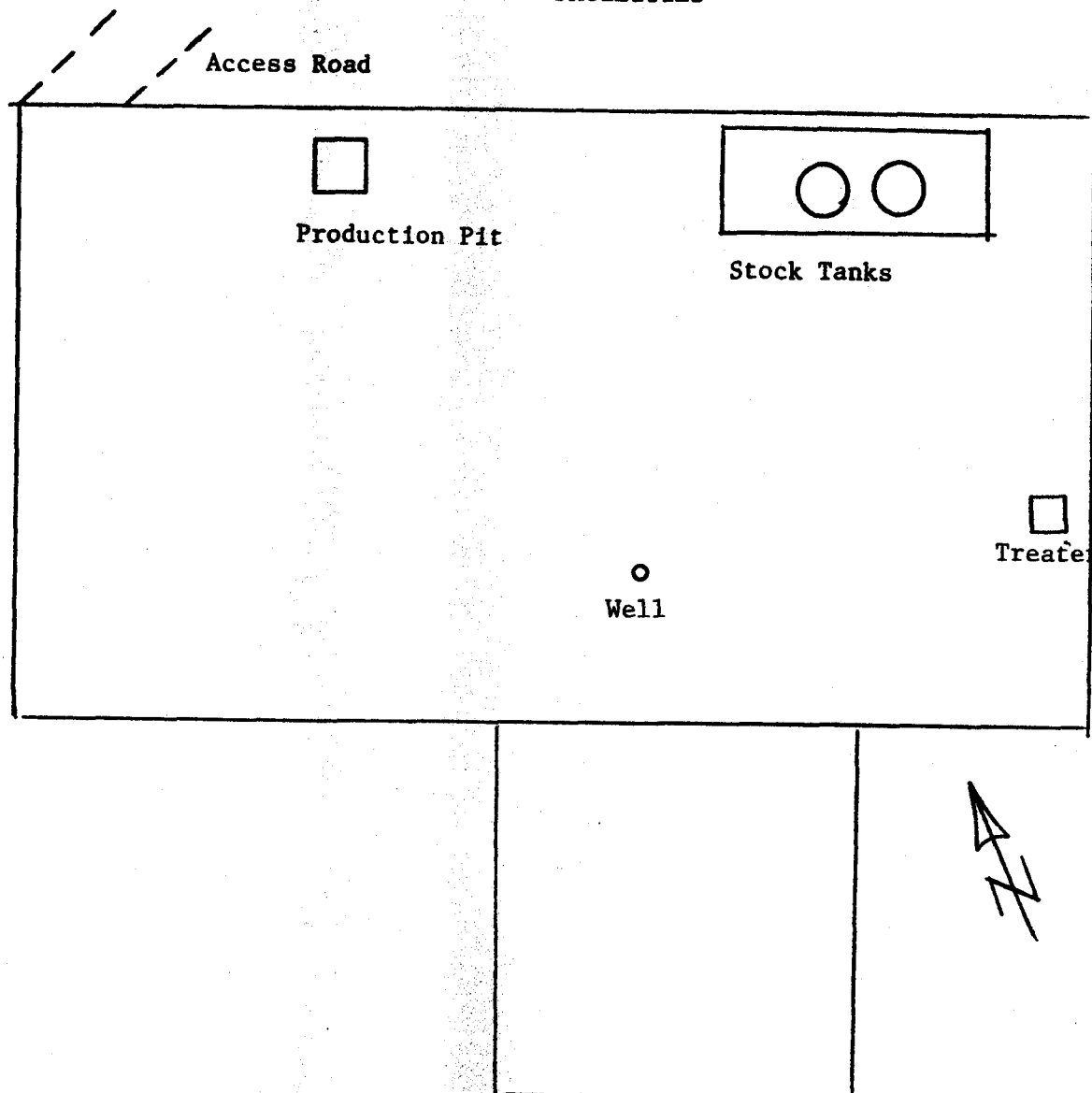
Nov 10, 1987  
Date

RCT/lms:1  
11-10-87

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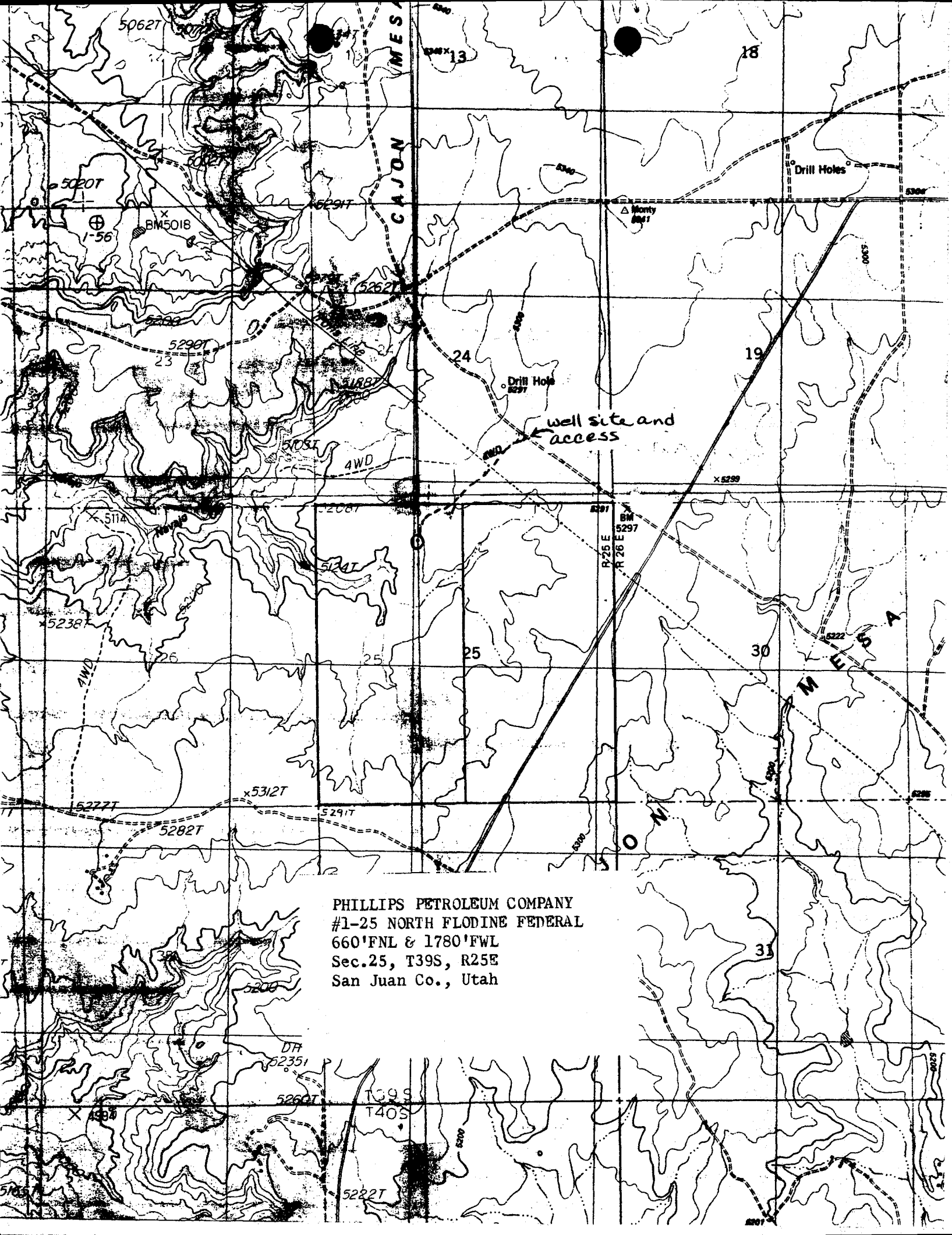
PROPOSED PRODUCTION FACILITIES



PHILLIPS PETROLEUM COMPANY  
NORTH FLODINE FEDERAL 1-25  
NE NW Sec. 25- T39S-R25E  
San Juan County, Utah

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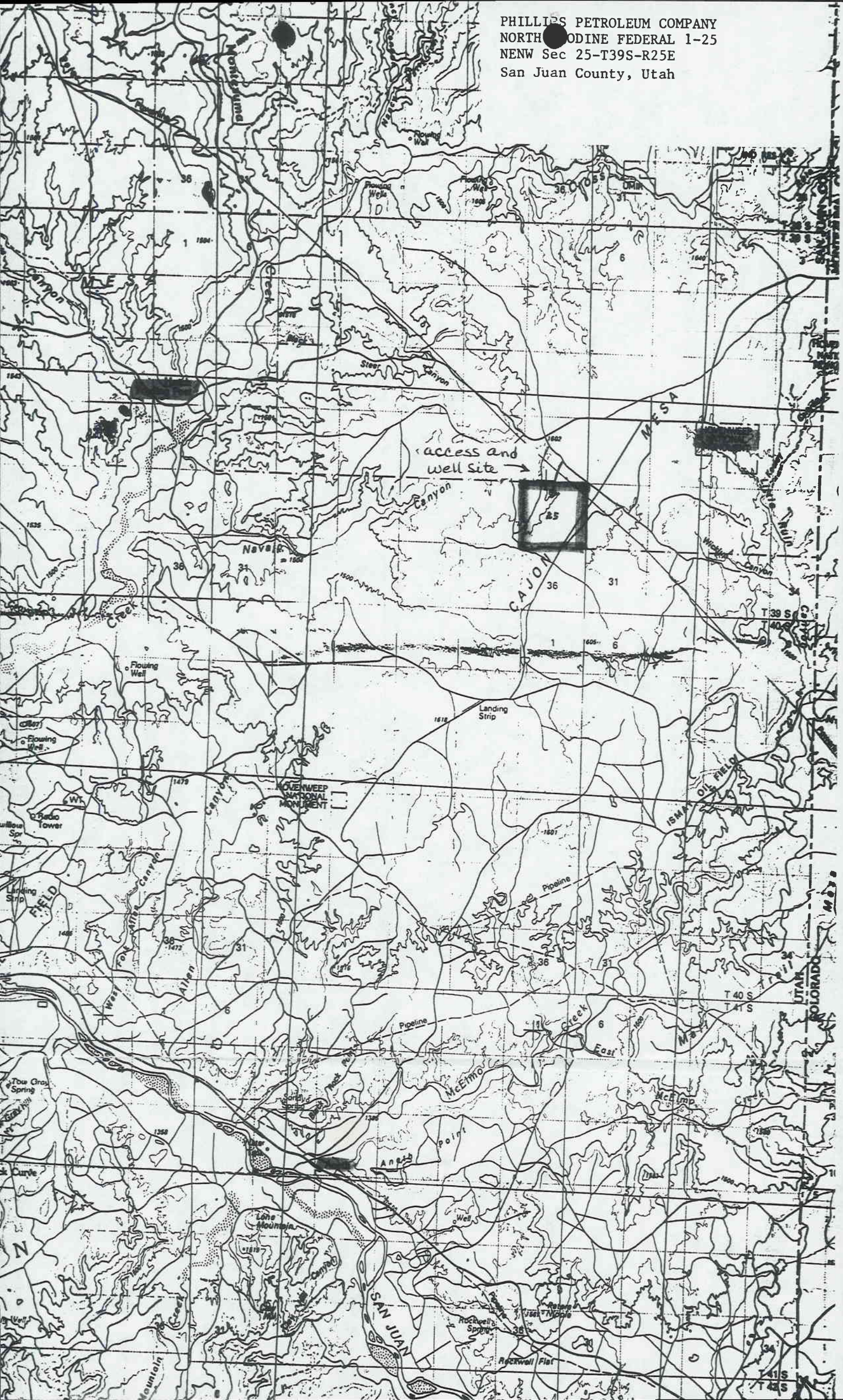
DIVISION OF  
OIL, GAS & MINING



PHILLIPS PETROLEUM COMPANY  
#1-25 NORTH FLODINE FEDERAL  
660'FNL & 1780'FWL  
Sec.25, T39S, R25E  
San Juan Co., Utah



PHILLIPS PETROLEUM COMPANY  
NORTH OGDINE FEDERAL 1-25  
NENW Sec 25-T39S-R25E  
San Juan County, Utah





121005

**CONFIDENTIAL**

OPERATOR

*Phillips Petroleum Co.*

DATE

*11-13-87*

WELL NAME

*North Hobline Ald. 1-25*

SEC

*NE NW 25*

T

*395*

R

*25E*

COUNTY

*San Juan*

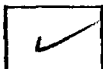
43-037-31369

API NUMBER

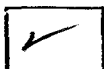
*Lease*

TYPE OF LEASE

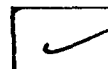
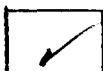
CHECK OFF:



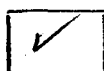
PLAT



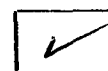
BOND

NEAREST  
WELL

LEASE



FIELD

POTASH OR  
OIL SHALE

PROCESSING COMMENTS:

*No other well in Sec. 24 & 25**Need water permit***CONFIDENTIAL****PERIOD****EXPIRED**ON *4-13-84*

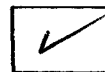
APPROVAL LETTER:

SPACING:



R615-2-3

UNIT



R615-3-2



CAUSE NO. &amp; DATE



R615-3-3

STIPULATIONS:

*1- Water*

0218T

STATE ACTIONS

Mail to:  
RDCC Coordinator  
116 State Capitol  
Salt Lake City, Utah 84114

- 
1. ADMINISTERING STATE AGENCY  
OIL, GAS AND MINING  
355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, UT 84180-1203
2. STATE APPLICATION IDENTIFIER NUMBER:  
(assigned by State Clearinghouse)
- 
3. APPROXIMATE DATE PROJECT WILL START:  
Upon approval
- 
4. AREAWIDE CLEARING HOUSE(S) RECEIVING STATE ACTIONS:  
(to be sent out by agency in block 1)  
Southeastern Utah Association of Local Governments
- 
5. TYPE OF ACTION: / / Lease /X/ Permit / / License / / Land Aquisition  
/ / Land Sale / / Land Exchange / / Other
- 
6. TITLE OF PROPOSED ACTION:  
Application for Permit to Drill
- 
7. DESCRIPTION:  
Phillips Petroleum Company proposes to drill a wildcat well, the North Flodine Federal #1-25, on federal lease number U-46954 in San Juan County, Utah. This action is being presented to RDCC for consideration of resource issues affecting state interests. The U.S. Bureau of Land Management is the primary administrative agency in this case and must issue approval to drill jointly with DOGM before operations can commence.
- 
8. LAND AFFECTED (site location map required) (indicate county)  
NE/4, NW/4, Section 25, Township 39 South, Range 25 East, San Juan County, Utah
- 
9. HAS THE LOCAL GOVERNMENT(S) BEEN CONTACTED?  
Unknown
- 
10. POSSIBLE SIGNIFICANT IMPACTS LIKELY TO OCCUR:  
No significant impacts are likely to occur
- 
11. NAME AND PHONE NUMBER OF DISTRICT REPRESENTATIVE FROM YOUR AGENCY NEAR PROJECT SITE, IF APPLICABLE:  
Chip Hutchinson, Moab, 259-8151
- 
12. FOR FURTHER INFORMATION, CONTACT: 13. SIGNATURE AND TITLE OF AUTHORIZED OFFICIAL  
John Baza  
PHONE: 538-5340  
DATE: 11-16-97  
Petroleum Engineer
-



116 State Capitol Building  
Salt Lake City, UT 84114  
Telephone 801-533-5245

## office of planning and budget

Norman H. Bangerter, Governor Dale C. Hatch, C.P.A., J.D., Director Michael E. Christensen, Ph.D., Deputy Director

December 2, 1987

John Baza  
Division of Oil, Gas and Mining  
3 Triad Center, Suite 350  
355 West North Temple  
Salt Lake City, Utah 84180-1203

SUBJECT: Phillips Petroleum, Inc. Application for Permit to Drill a Wildcat Well, the North Flodine Federal #1-25, on federal lease #U-46954, San Juan County  
State Application Identifier #UT871119-010

Dear John:

The Resource Development Coordinating Committee of the State of Utah has reviewed this proposed action and the Division of State History comments:

We understand that the Bureau of Land Management is the primary (lead) agency and that approval for this will must be received from the BLM as well as DOGM prior to drilling.

We have also received, from La Plata Archeological Consultants, a copy of the archeological survey report for this project. One cultural resource site (42Sal8754) was identified by the cultural resource survey. We can concur with a finding that site 42Sal8754 needs additional testing to determine its eligibility for the National Register of Historic Places. However, we understand that this site is approximately 100 feet from the proposed well pad. If the site is adequately protected during construction, we could also concur with a determination that the site is potentially eligible and that the project would have no effect on the site.

We also agree with the archeological consultant's recommendation that an archeological monitor be present during the construction of the access road and well pad, as there appears to be a high possibility that buried cultural materials are present within the project area.

The above is provided on request as outlined by CFR 800 or Utah Code, Title 63-18-37. If you have questions or need additional assistance, please contact David Schirer at (801) 533-7039.

The Committee appreciates the opportunity of reviewing this document. Please address any other questions regarding this correspondence to Carolyn Wright (801) 538-1535.

Sincerely,

*Michael E. Christensen*

Michael E. Christensen  
Deputy Director

DCH/jw

RECEIVED  
DEC 3 1987

30 November 1987

DIVISION OF  
OIL, GAS & MINING



NORMAN H. BANGERTER  
GOVERNOR

DC  
ED

STATE OF UTAH  
DEPARTMENT OF COMMUNITY AND  
ECONOMIC DEVELOPMENT

Chairperson  
Resource Development Coordinating Committee  
State Planning Office  
118 State Capitol  
Salt Lake City, UT 84114

Division of  
State History  
(UTAH STATE HISTORICAL SOCIETY)

MAX J. EVANS, DIRECTOR  
300 RIO GRANDE  
SALT LAKE CITY, UTAH 84101-1182  
TELEPHONE 801/533-5755

RE: Phillips Petroleum Company's North Flodine Federal #1-25 Wildcat Well, San Juan County (SAI #871119-010)

In Reply Please Refer to Case No. K623

Dear Chairperson:

The Utah State Historic Preservation Office has received the State Action form for the above referenced proposed project. We understand that the Bureau of Land Management is the primary (lead) agency and that approval for this well must be received from the BLM as well as DOGM prior to drilling.

We have also received, from La Plata Archeological Consultants, a copy of the archeological survey report for this project. One cultural resource site (42Sa18754) was identified by the cultural resource survey. We can concur with a finding that site 42Sa18754 needs additional testing to determine its eligibility for the National Register of Historic Places. However, we understand that this site is approximately 100 feet from the proposed well pad. If the site is adequately protected during construction, we could also concur with a determination that the site is potentially eligible and that the project would have no effect on the site.

We also agree with the archeological consultant's recommendation that an archeological monitor be present during the construction of the access road and well pad, as there appears to be a high possibility that buried cultural materials are present within the project area.

The above is provided on request as outlined by 36 CFR 800 or Utah Code, Title 63-18-37. If you have questions or need additional assistance, please contact David Schirer at (801) 533-7039.

Sincerely,

A. Kent Powell  
Deputy State Historic Preservation Officer

DLS:jrc:K623/4923V SCR/DOE/NE

cc: Dale Davidson, Area Archeologist, Bureau of Land Management, P.O. Box 7,  
Monticello, Utah 84535  
John Baza, DOGM

# SOUTHEASTERN UTAH ASSOCIATION OF LOCAL GOVERNMENTS

HAROLD JACOBSON  
Chairman

P. O. Drawer A1 • Price, Utah 84501 • Telephone 637-5444

WILLIAM D. WELLS  
Executive Director

DEC 4 1987

DIVISION OF  
OIL, GAS & MINING

## AREAWIDE CLEARINGHOUSE A-95 REVIEW

NOI \_\_\_ Preapp \_\_\_ App \_\_\_ State Plan \_\_\_ State Action X Subdivision \_\_\_ (ASP # 11-1117-11)

Other (indicate) \_\_\_\_\_ SAI Number UT

Applicant (Address, Phone Number):

Oil, Gas and Mining  
355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203

Federal Funds:

Requested: \_\_\_\_\_

Title:

APPLICATION FOR PERMIT TO DRILL (Phillips Petroleum Co.)

*North Flodine Fed # 1-25*

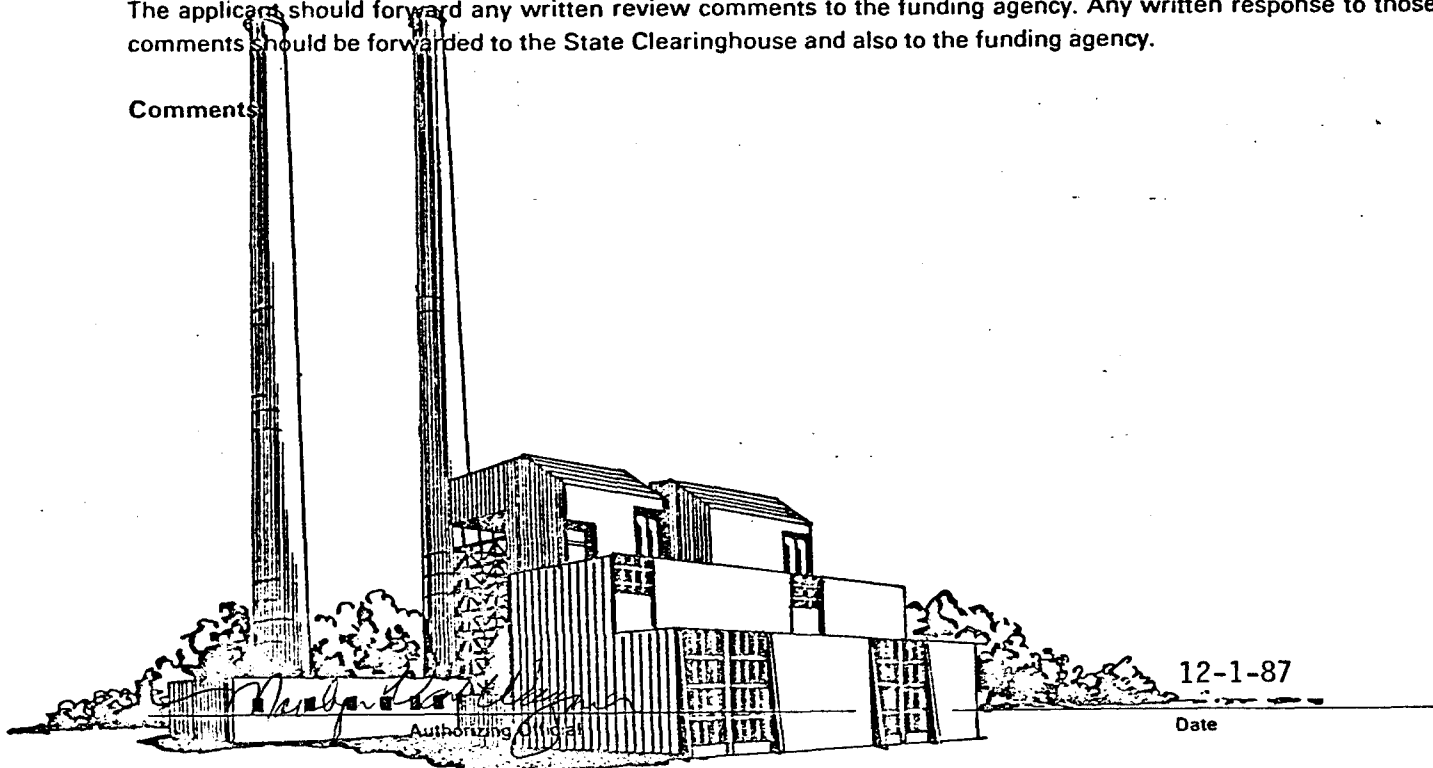
*25-39S - 25E*

*San Juan Co.*

- ☒ No comment  
☐ See comments below  
☐ No action taken because of insufficient information  
☐ Please send your formal application to us for review. Your attendance is requested ☐

The applicant should forward any written review comments to the funding agency. Any written response to those comments should be forwarded to the State Clearinghouse and also to the funding agency.

Comments:



REGIONAL CLEARINGHOUSE



STATE OF UTAH  
NATURAL RESOURCES  
Oil, Gas & Mining

Norman H. Bangerter, Governor  
Dee C. Hansen, Executive Director  
Dianne R. Nielson, Ph.D., Division Director

355 W. North Temple • 3 Triad Center • Suite 350 • Salt Lake City, UT 84180-1203 • 801-538-5340

December 8, 1987

Phillips Petroleum Company  
P. O. Box 2920  
Casper, Wyoming 82602

Gentlemen:

Re: North Flodine Federal 1-25 - NE NW Sec. 25, T. 39S, R. 25E  
660' FNL, 1780' FWL - San Juan County, Utah

Approval to drill the referenced well is hereby granted in accordance with Rule R615-3-2, Oil and Gas Conservation General Rules, subject to the following stipulations:

1. Prior to commencement of drilling, receipt by the Division of evidence providing assurance of an adequate and approved supply of water as required by Chapter 3, Title 73, Utah Code Annotated.

In addition, the following actions are necessary to fully comply with this approval:

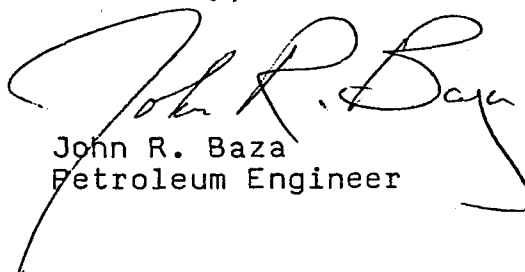
1. Spudding notification to the Division within 24 hours after drilling operations commence.
2. Submittal of an Entity Action Form to the Division within five working days of the time that the well is spudded or a change in operations or interests necessitates a change in entity status.
3. Submittal to the Division of completed Form OGC-8-X, Report of Water Encountered During Drilling.
4. Prompt notification to the Division should you determine that it is necessary to plug and abandon this well. Notify John R. Baza, Petroleum Engineer, (Office) (801) 538-5340, (Home) 298-7695, or R. J. Firth, Associate Director, (Home) 571-6068.
5. Compliance with the requirements of Rule R615-3-22, Gas Flaring or Venting, Oil and Gas Conservation General Rules.

Page 2  
Phillips Petroleum Company  
North Flodine Federal 1-25  
December 8, 1987

6. Prior to commencement of the proposed drilling operations, plans for toilet facilities and the disposal of sanitary waste at the drill site shall be submitted to the local health department having jurisdiction. Any such drilling operations and any subsequent well operations must be conducted in accordance with applicable state and local health department regulations. A list of all local health departments and copies of applicable regulations are available from the Division of Environmental Health, Bureau of General Sanitation, telephone (801) 538-6121.
7. This approval shall expire one (1) year after date of issuance unless substantial and continuous operation is underway or an application for an extension is made prior to the approval expiration date.

The API number assigned to this well is 43-037-31369.

Sincerely,



John R. Baza  
Petroleum Engineer

as  
Enclosures  
cc: Branch of Fluid Minrals  
D. R. Nielson  
8159T

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

## APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

RECEIVED  
46954  
DEC 14 1987

## 1a. TYPE OF WORK

DRILL ☒DEEPEN ☐PLUG BACK ☐

## b. TYPE OF WELL

OIL  
WELL ☒GAS  
WELL ☐

OTHER

SINGLE  
ZONE ☐MULTIPLE  
ZONE ☐

## 2. NAME OF OPERATOR

Phillips Petroleum Company

## 3. ADDRESS OF OPERATOR

P.O. Box 2920, Casper, WY 82602

## 4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.\*)

At surface

660' FNL, 1780' FWL (NENW)

At proposed prod. zone

Same

43-037-31369

## 14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*

17 Miles N. Aneth, Utah

## 15. DISTANCE FROM PROPOSED\*

LOCATION TO NEAREST  
PROPERTY OR LEASE LINE, FT.  
(Also to nearest drig. unit line, if any)

660

## 16. NO. OF ACRES IN LEASE

640

17. NO. OF ACRES ASSIGNED  
TO THIS WELL

40

## 18. DISTANCE FROM PROPOSED LOCATION\*

TO NEAREST WELL, DRILLING, COMPLETED,  
OR APPLIED FOR, ON THIS LEASE, FT.

N/A

## 19. PROPOSED DEPTH

6150'

## 20. ROTARY OR CABLE TOOLS

Rotary

## 21. ELEVATIONS (Show whether DF, RT, GR, etc.)

5255' GR

## 22. APPROX. DATE WORK WILL START\*

Immediately Upon  
Approval

## 23.

## PROPOSED CASING AND CEMENTING PROGRAM

| SIZE OF HOLE | SIZE OF CASING | WEIGHT PER FOOT | SETTING DEPTH | QUANTITY OF CEMENT          |
|--------------|----------------|-----------------|---------------|-----------------------------|
| 20"          | 13-3/8"        | 40# H-40 STC    | 100'          | 150 sx circ to surface      |
| 12-1/4"      | 9-5/8"         | 36# K-55 STC    | 2000'         | 1000 sx circ to surface     |
| 8-3/4"       | 5-1/2"         | 15.5# K-55 STC  | 6150'         | to be determined, TOC 2000' |

Phillips Petroleum Company proposes to drill a 6150 ft. exploratory well to the Akah Formation. Blow out preventers will be operated daily and tested weekly.

cc: O+3 BLM - Moab, Utah

1 G.W. Berk  
1 P.J. Konkle  
1 R. Ewing  
2 Utah DOGM  
1 J.R. Reno  
1 R.C. Taylor

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

## 24.

SIGNED

D.C. Gill

TITLE

Area Manager

DATE

11-06-87

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY

/s/ Kenneth V. Rhea

TITLE

Acting DISTRICT MANAGER

DATE

DEC 11 1987

CONDITIONS OF APPROVAL, IF ANY:

FLARING OR VENTING OF  
GAS IS SUBJECT OF NTL 4-A  
DATED 1/1/80

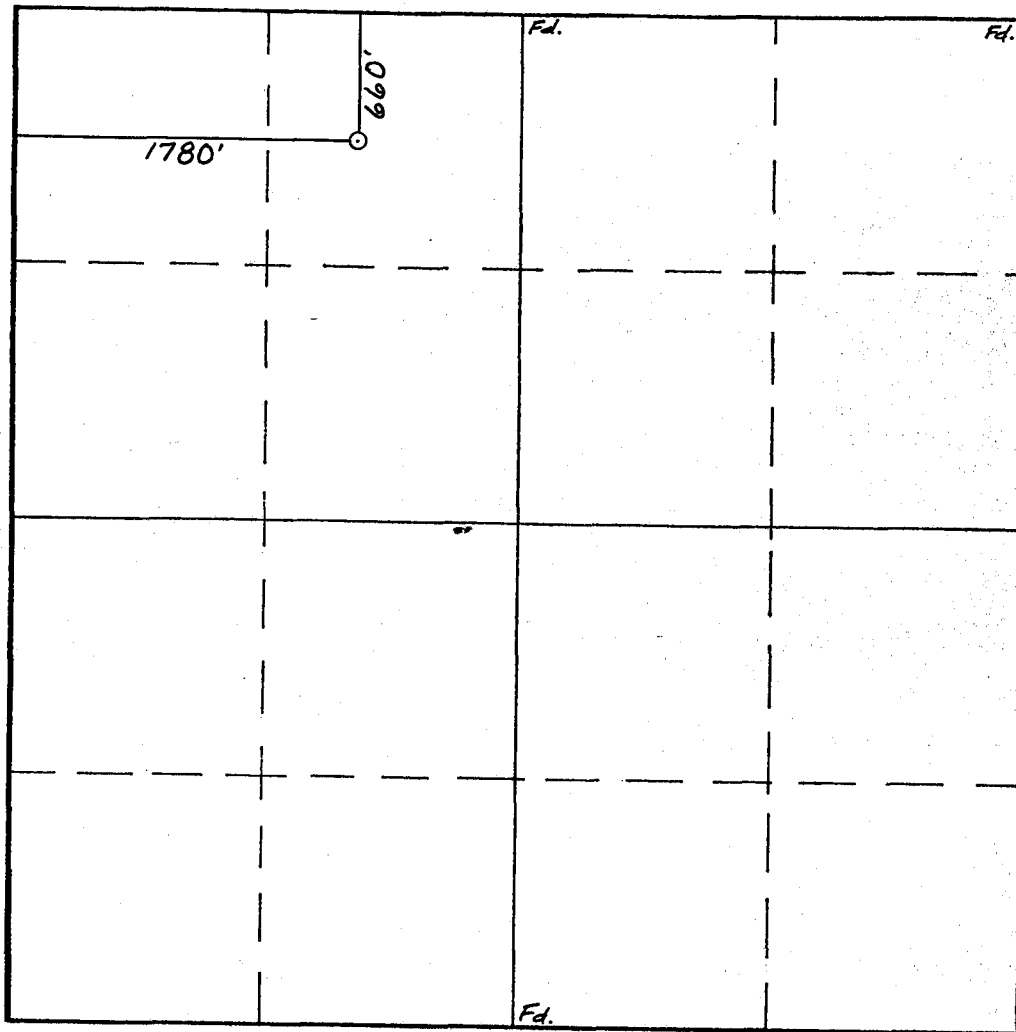
CONDITIONS OF APPROVAL ATTACHED

\*See Instructions On Reverse Side

SUBJECT TO RIGHT OF WAY  
APPROVAL



COMPANY PHILLIPS PETROLEUM COMPANY  
LEASE NORTH FLODINE FEDERAL WELL NO. 1-25  
SEC. 25, T. 39 S, R. 25 E  
COUNTY San Juan STATE Utah  
LOCATION 660'FNL & 1780'FWL  
ELEVATION 5230



SCALE : 1" = 1000'

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

SEAL:



*William E. Mahnke II*  
WILLIAM E. MAHNKE II  
NEW MEXICO P.L.S. Nº 8466

SURVEYED Nov. 7, 1987

Phillips Petroleum Company  
Well No. North Flodine Federal 1-25  
Sec. 25, T. 39 S., R. 25 E.  
San Juan County, Utah  
Lease U-46954

CONDITIONS OF APPROVAL

Approval of this application does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

B. THIRTEEN POINT SURFACE USE PLAN

1. Clyde Benally of Mobil Oil Corporation (303-565-2205) will be notified 48 hours prior to padding over and crossing the CO<sub>2</sub> pipeline.
2. A Bureau of Land Management (BLM) approved archaeologist will monitor initial blading of the access route. If cultural resources are found during construction, all work will stop and the San Juan Area Manager will be notified.
3. The access will be flatbladed to a 20 foot wide running surface for drilling.

Surface disturbance and vehicular travel will be limited to the approved location and access road. Any additional area needed will be approved by the Area Manager in advance.

The access road will be rehabilitated or brought to Resource (Class III) Road Standards, 20-30 foot ~~with~~ wide running surface, within sixty (60) days of dismantling of the drilling rig. If this time frame cannot be met, the Area Manager will be notified so that temporary drainage control can be installed along the access road.

4. Tank Battery and Production Facilities:

All permanent (onsite for six (6) months or longer) structures constructed or installed (including oil well pump jacks) will be painted a flat, nonreflective, earth tone color to match the standard environmental colors, as determined by the Rocky Mountain Five-State Interagency Committee. All facilities will be painted within (6) six months of installation. Facilities required to comply with the Occupational Safety and Health Act (OSHA) may be excluded. Colors will be neutral to match the sagebrush or soil surface.

If a tank battery is constructed on this lease, it will be surrounded by a dike of sufficient capacity to contain 1-1/2 times the storage capacity of the largest tank in the battery.

All loading lines and valves will be placed inside the berm surrounding the tank battery.

All site security guidelines identified in 43 CFR 3162.7-4 regulations will be adhered to.

All off-lease storage, off-lease measurement, or commingling on-lease or off-lease will have prior written approval from the District Manager.

All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed.

Gas meter runs for each well will be located within five hundred (500) feet of the wellhead. The gas flowline will be buried from the well head to the meter and downstream for the remainder of the pad. Meter runs will be housed and/or fenced.

The oil and gas measurement facilities will be installed on the well location. The oil and gas meters will be calibrated in place prior to any deliveries. Tests for meter accuracy will be conducted monthly for the first three (3) months on new meter installations and at least quarterly thereafter. The Area Manager will be provided with a date and time for the initial calibration and all future meter-proving schedules. A copy of the meter calibration reports will be submitted to the Resource Area Office. All meter measurement facilities will conform with the API standards for liquid hydrocarbons and the AGA standard for natural gas measurement.

5. Three sides of the reserve pit will be fenced with net wire before drilling starts. The fourth side will be fenced as soon as the drilling is completed. The fence will be kept in good repair while the pit is drying.

6. Surface Restoration:

Immediately upon completion of drilling, the location and surrounding area will be cleared of all remaining debris, materials, trash and junk not required for production.

Before any dirt work to restore the location takes place, the reserve pit must be completely dry.

All disturbed areas will be recontoured to the approximate natural contours.

The stockpiled topsoil will be evenly distributed over the disturbed contours.

Prior to reseeding, all disturbed areas, including the access roads, will be scarified and left with a rough surface. The area will be ripped 6 inches deep with rips 18-24 inches apart.

Seed will be broadcast or drilled at a time specified by the BLM. If broadcast, a harrow or some other implement will be dragged over the seeded area to assure seed coverage.

Seed between October 1 and February 28. The following seed mixture will be used: (PLS)

6 lbs/ac Crested Wheatgrass  
1 lb/ac Fourwing Saltbush  
1/2 lb/ac Yellow Sweet Clover

The reserve pit and that portion of the location and access road not needed for production or production facilities will be reclaimed.

NOTIFICATIONS

Notify the San Juan Resource Area, at (801) 587-2141 for the following:

2 days prior to commencement of dirt work, construction or reclamation;

1 day prior to spudding;

~~1 day prior to running and cementing surface casing;~~

~~1 day prior to pressure testing of BOPF and/or surface casing.~~

Notify the Moab District Office, Branch of Fluid Minerals at (801) 259-6111 for the following:

No well abandonment operations will be commenced without the prior approval of the District Manager. In the case of newly drilled dry holes, and in emergency situations, verbal approval can be obtained by calling the following individuals, in the order listed:

Dale Manchester, Petroleum Engineer      Office Phone: (801) 259-6111

Home Phone: (801)

Lynn Jackson, Chief, Branch of Fluid Minerals

Office Phone: (801) 259-6111

Home Phone: (801) 259-7990

Paul Brown, I&E Coordinator

Office Phone: (801) 259-6111

Home Phone: (801) 259-7018

24 hours advance notice is required for all abandonments.

TEMPORARY

# FILING FOR WATER IN THE STATE OF UTAH

DEC 21 1987

DEC 16 1987

Rec. by 98  
Fee Rec. 30.00  
Receipt # 23458  
Microfilmed  
Roll # 010612

## APPLICATION TO APPROPRIATE WATER RIGHTS

SALT LAKE

PRICE

For the purpose of acquiring the right to use a portion of the unappropriated water of the State of Utah, application is hereby made to the State Engineer, based upon the following showing of facts, submitted in accordance with the requirements of the Laws of Utah.

43.037-3136A  
Dulg

\* WATER RIGHT NO. 09 — 1552

\* APPLICATION NO. A T63001

1. \*PRIORITY OF RIGHT: December 16, 1987 \* FILING DATE: December 16, 1987

### 2. OWNER INFORMATION

Name(s): Phillips Petroleum Company \* Interest: 100 %

Address: 8055 E Tufts Ave Parkway

City: Denver State: Colorado Zip Code: 80237

Is the land owned by the applicant? Yes \_\_\_\_\_ No X

(If "No", please explain in EXPLANATORY section.)

3. QUANTITY OF WATER: \_\_\_\_\_ cfs and/or 1.29 ac-ft

4. SOURCE: underwater water well \* DRAINAGE: \_\_\_\_\_

which is tributary to \_\_\_\_\_

which is tributary to \_\_\_\_\_

POINT(S) OF DIVERSION: \_\_\_\_\_ COUNTY: San Juan County

Nancy Patterson artesia water well located: 798' north and 1876' east of SW corner, Section 28: T38S-R25E

Description of Diverting Works: Nancy Patterson artesia water well, diameter and depth

\* COMMON DESCRIPTION: 4½ miles NE of Hatch Trading Post Cañon Mesa Quad

### 5. POINT(S) OF REDIVERSION

The water will be rediverted from not applicable at a point:

\_\_\_\_\_

\_\_\_\_\_

Description of Rediverting Works: \_\_\_\_\_

### 6. POINT(S) OF RETURN

The amount of water consumed will be \_\_\_\_\_ cfs or 1.29 ac-ft

The amount of water returned will be \_\_\_\_\_ cfs or none ac-ft

The water will be returned to the natural stream/source at a point(s): \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

### 7. STORAGE

Reservoir Name: not applicable Storage Period: from \_\_\_\_\_ to \_\_\_\_\_

Capacity: \_\_\_\_\_ ac-ft. Inundated Area: \_\_\_\_\_ acres

Height of dam: \_\_\_\_\_ feet

Legal description of inundated area by 40 acre tract(s): \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\* These items are to be completed by the Division of Water Rights

# TEMPORARY

Appropriate

8. List any other water rights which will supplement this application \_\_\_\_\_

**9. NATURE AND PERIOD OF USE**

Irrigation: From \_\_\_\_\_ to \_\_\_\_\_  
Stockwatering: From \_\_\_\_\_ to \_\_\_\_\_  
Domestic: From \_\_\_\_\_ to \_\_\_\_\_  
Municipal: From \_\_\_\_\_ to \_\_\_\_\_  
Mining: From \_\_\_\_\_ to \_\_\_\_\_  
Power: From \_\_\_\_\_ to \_\_\_\_\_  
Other: (drilling of exploratory oil well) From 12/15/87 to 12/15/88

**10. PURPOSE AND EXTENT OF USE**

Irrigation: \_\_\_\_\_ acres. Sole supply of \_\_\_\_\_ acres.  
Stockwatering (number and kind): \_\_\_\_\_  
Domestic: \_\_\_\_\_ Families and/or \_\_\_\_\_ Persons  
Municipal (name): \_\_\_\_\_  
Mining: \_\_\_\_\_ Mining District in the \_\_\_\_\_ Mine  
Ores mined: \_\_\_\_\_  
Power: Plant name: \_\_\_\_\_ Type: \_\_\_\_\_ Capacity: \_\_\_\_\_  
Other (describe): drilling of exploratory oil wells

**11. PLACE OF USE**

Legal description of place of use by 40 acre tract(s): Exploration oil well as described below:  
North Flodine Federal No. 1-25 NE NW Section 25: T39S-R25E, San Juan County,  
(660' FNL and 1780' FWL)  
S. 660 ft. & E. 1780 ft. from NW Cor. Sec. 25, T39S, R25E, SLB&M (NE1/4NW1/4).

**12. EXPLANATORY**

The following is set forth to define more clearly the full purpose of this application. (Use additional pages of same size if necessary): \_\_\_\_\_

The fresh water will be used as make-up water  
for drilling fluids for the above referenced exploratory oil well.

\*\*\*\*\*

The applicant(s) hereby acknowledges that he/she/they are a citizen(s) of the United States of America or intends to become such a citizen(s). The quantity of water sought to be appropriated is limited to that which can be beneficially used for the purposes herein described. The undersigned hereby acknowledges that even though he/she/they may have been assisted in the preparation of the above-numbered application through the courtesy of the employees of the Division of Water Rights, all responsibility for the accuracy of the information contained herein, at the time of filing, rests with the applicant(s).

  
\_\_\_\_\_  
Signature of Applicant(s)

For: G. W. Berk, NWR Drilling Manager  
Phillips Petroleum Company



STATE ENGINEER'S ENDORSEMENT

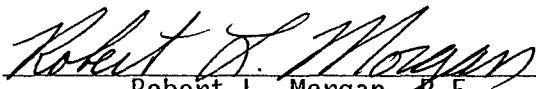
WATER RIGHT NUMBER: 09 - 1552

APPLICATION NO. T63001

1. December 16, 1987    Application received by MP.
  2. December 16, 1987    Application designated for APPROVAL by MP and KLJ.
  3. Comments:
- 
- 

Conditions:

This application is hereby APPROVED, dated December 31, 1987, subject to prior rights and this application will expire on December 31, 1988.

  
Robert L. Morgan, P.E.  
State Engineer

122819

Dr.

## DIVISION OF OIL, GAS AND MINING

SPODDING INFORMATION

API #43-037-31369

NAME OF COMPANY: PHILLIPS PETROLEUM COMPANYWELL NAME: NORTH FLODINE FEDERAL 1-25SECTION NE NW 25 TOWNSHIP 39S RANGE 25E COUNTY SAN JUANDRILLING CONTRACTOR FOUR CORNERSRIG # 3SPUDDED: DATE 12-20-87TIME 11:00 PMHOW Rotary

DRILLING WILL COMMENCE \_\_\_\_\_

REPORTED BY Dean DurellTELEPHONE # (801) 651-3434DATE 12-21-87 SIGNED JRB

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPlicate  
(Other instructions on re-  
verse side)

Budget Bureau No. 1004-0135  
Expires August 31, 1985

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.  
Use "APPLICATION FOR PERMIT" for such proposals.)

|  |  |   |  |  |  |  |  |                                    |  |  |  |  |  |  |  |                        |  |  |  |                      |  |   |  |   |  |                                  |  |                   |  |
|--|--|---|--|--|--|--|--|------------------------------------|--|--|--|--|--|--|--|------------------------|--|--|--|----------------------|--|---|--|---|--|----------------------------------|--|-------------------|--|
| 1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/> |  | 2. NAME OF OPERATOR<br>Phillips Petroleum Company |  | 3. ADDRESS OF OPERATOR<br>152 N. Durbin, 2nd Floor, Casper, WY 82601 |  | 4. LOCATION OF WELL (Report location clearly and in accordance with any State and Federal mapping. See also space 17 below.)<br>At surface 660' FNL & 1780' FWL, NE NW |  | 5. PERMIT NO.<br>API #43-037-31369 |  | 6. ELEVATIONS (Show whether DF, RT, GR, etc.)<br>GR 5255', RKB 5267' |  | 7. LEASE DESIGNATION AND SERIAL NO.<br>U-46954 |  | 8. IF INDIAN, ALLOTTEE OR TRIBE NAME<br>012004 |  | 9. UNIT AGREEMENT NAME |  | 10. FARM OR LEASE NAME<br>N. Flodine Federal |  | 11. WELL NO.<br>1-25 |  | 12. FIELD AND POOL, OR WILDCAT<br>Wildcat |  | 13. SEC., T., R., M., OR BLK. AND SURVEY OR AREA<br>Sec. 25-T39S-R25E |  | 14. COUNTY OR PARISH<br>San Juan |  | 15. STATE<br>Utah |  |
|--|--|---|--|--|--|--|--|------------------------------------|--|--|--|--|--|--|--|------------------------|--|--|--|----------------------|--|---|--|---|--|----------------------------------|--|-------------------|--|

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

PULL OR ALTER CASING

MULTIPLE COMPLETE

ABANDON\*

CHANGE PLANS

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other) STATUS REPORT

REPAIRING WELL

ALTERING CASING

ABANDONMENT\*

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

CONFIDENTIAL INFORMATION

DECEMBER 1987

INITIAL REPORT. RURT 12/20/87. Drld mouse and rat holes. Spudded 17-1/2" surface hole at 11:00 pm, 12/20/87. Drld to 103'. Set 13-3/8" csg at 103'. Drld 12-1/4" hole to 2002'. Set 9-5/8" csg at 2002', cmtd w/1040 sx Class B, tailed in w/60 sx Class B. Drld 8-3/4" hole to 4504'. Surveys - 1/2 deg at 64', 1/4 deg at 258', 1/2 deg at 791', 3/4 deg at 1313', 1/2 deg at 2464', 3/4 deg at 3450', 3/4 deg at 3999'. Mud 9.8, Vis 41.

4-BLM, Farmington, NM  
2-Utah O&G CC, SLC, UT  
1-File RC

18. I hereby certify that the foregoing is true and correct

SIGNED

*D. C. Gill*  
D. C. Gill

TITLE

Area Manager

DATE

January 12, 1988

(This space for Federal or State office use)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

\*See Instructions on Reverse Side

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE  
(Other instructions on re-  
verse side)

Budget Bureau No. 1004-0135  
Expires August 31, 1985

5. LEASE DESIGNATION AND SERIAL NO.

U-46954

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

North Flodine Federal

9. WELL NO.

#1-25

10. FIELD AND POOL, OR WILDCAT

Wildcat

11. SEC., T., R., M., OR BLK. AND  
SURVEY OR AREA

Sec.25-T39S-R25E

12. COUNTY OR PARISH

San Juan

13. STATE

UT

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.  
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL ☒ GAS WELL ☐ OTHER ☐
2. NAME OF OPERATOR  
Phillips Petroleum Co. (Atten: NWR Drilling Group)
3. ADDRESS OF OPERATOR  
8055 Ea. Tufts Ave. Pkwy, Denver, Colo. 80237
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.\*  
See also space 17 below.)  
At surface  
  
660' FNL, 1780' FWL (NE/NW)

14. PERMIT NO.  
4303731369

15. ELEVATIONS (Show whether DF, HT, GR, etc.)  
5232.7' Gr. GL

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

PULL OR ALTER CASING

MULTIPLE COMPLETE

ABANDON\*

CHANGE PLANS

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

REPAIRING WELL

ALTERING CASING

ABANDONMENT\*

Monthly Drilling Report

(NOTE: Report results of multiple completion on Well  
Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

\*\*\* TITE HOLE \*\*\* TITE HOLE \*\*\* TITE HOLE \*\*\* TITE HOLE \*\*\* TITE HOLE \*\*\* TITE HOLE \*\*\*

DECEMBER 1 - DECEMBER 31, 1987

17½" conductor hole drilled to 103'

12-20) Spudded well at 2300 hrs 12-20-87 with Four Corners Drilling rig #3.  
Ran 13-3/8" conductor pipe set at 103' and cemented same with C1"B" cmt.

Drilled out and ahead to 2002'. Ran 45-jts. 9-5/8" 36# casing set at 2002' and cemented with 1100 sx C1"B" + additives. Cemented to surface. Drilled out and ahead.

12-31) Drilling ahead at 4175', last survey: 3/4° at 3999'.

18. I hereby certify that the foregoing is true and correct

SIGNED

TITLE

Drilling Manager

DATE

1-14-88

(This space for Federal or State office use)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

\*See Instructions on Reverse Side

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPPLICATE  
(Other instructions on re-  
verse side)

Budget Bureau No. 1004-0135  
Expires August 31, 1985

5. LEASE DESIGNATION AND SERIAL NO.

U-46954

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug or to a different proposal.  
Use "APPLICATION FOR PERMIT" for such proposals.)

JAN 19 1988

|  |  |   |  |
|--|--|---|--|
| 1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>   |  | 7. UNIT AGREEMENT NAME  |  |
| 2. NAME OF OPERATOR<br>Phillips Petroleum Co. (Atten: NWR Drilling Group)  |  | 8. FARM OR LEASE NAME<br>North Flodine Federal                          |  |
| 3. ADDRESS OF OPERATOR<br>8055 Ea. Tufts Ave. Pkwy, Denver, Colo. 80237  |  | 9. WELL NO.<br>#1-25  |  |
| 4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.<br>See also space 17 below.)<br>At surface<br>660 FNL, 1780 FWL (Sec.25-T39S-R25E) |  | 10. FIELD AND POOL, OR WILDCAT<br>Wildcat                               |  |
| 14. PERMIT NO.<br>43-037-31369   |  | 11. SEC., T., R., N., OR S.E. AND<br>SURVEY OR AREA<br>Sec.25-T39S-R25E |  |
| 15. ELEVATIONS (Show whether DF, RT, GR, etc.)<br>5245' RKB, 5233' GL  |  | 12. COUNTY OR PARISH<br>San Juan  |  |
|  |  | 13. STATE<br>Utah   |  |

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

SUBSEQUENT REPORT OF:

TEST WATER SHUT-OFF

PULL OR ALTER CASING

WATER SHUT-OFF

REPAIRING WELL

FRACTURE TREAT

MULTIPLE COMPLETION

FRACTURE TREATMENT

ALTERING CASING

SHOOT OR ACIDIZE

ABANDON\*

SHOOTING OR ACIDIZING

ABANDONMENT\*

REPAIR WELL

CHANGE PLANS

(Other)

(Other)

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

MIRU Four Corners Drilling rig #3. Spud well 12-20-87. Drilled 17½" conductor hole to 103' RKB on 12-21-87. Ran 92.58' of 13-3/8" 61# ST&C csg set @ 103' RKB. Cemented w/150-sx (177 cu.ft.) C1"B" w/2% CaCl2.

Drilled 12¼" hole to 2002' RKB. Ran 9-5/8" 36# K-55 ST&C csg. set @ 2002'. Cemented w/1040-sx (1227 cu.ft.) Western C1"B" cmt. Circulated to surface, fell back, topped off w/60-sx C1"B" cement.

Drilled 8-3/4" hole to 5810'. Cored Upper Ismay: 5810-5870'. Ran DST #1 of Upper Ismay: 5846-5870'. Drilled 8-3/4" hole to 6040'. Ran DST #2 of Desert Creek: 5980-6040'.

Drilled 8-3/4" hole to 6100'. Ran Schlumberger Dual Laterolog w/Micro-SFL, BHC Sonic log and Compensated Neutron-Litho Density log.

Plugged and Abandoned well as follows:

Plug #1: 5694-5994' w/125 sx C1"B" cmt Desert Creek, Upper & Lower Ismay  
Plug #2: 3385-3617' w/120 sx C1"B" cmt w/2% CaCl2, DeChelly  
Plug #3: 1949-2154' w/150 sx C1"B" cmt w/2% CaCl2, Surface Casing Shoe  
Plug #4: Sfc -60' w/20 sx C1"B" cmt w/2% CaCl2, Surface Plug

18. I hereby certify that the foregoing is true and correct

SIGNED

TITLE Drilling Manager

DATE 1-15-88

(This space for Federal or State office use)

APPROVED BY

TITLE

CONDITIONS OF APPROVAL, IF ANY:

ACCEPTED BY THE STATE  
OF UTAH DIVISION OF  
OIL, GAS, AND MINING

DATE: 1-20-88

BY: [Signature]

\*See Instructions on Reverse Side

DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

LEASE DESIGNATION AND SERIAL NO.  
U-46954 012113  
INDIAN, ALLOTTEE OR TRIBE NAME

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

JAN 19 1988

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☐ DRY ☒ Other ☐  
b. TYPE OF COMPLETION: NEW WELL ☐ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. REVR. ☐ Other ☐  
2. NAME OF OPERATOR: Phillips Petroleum Co. (Atten: NWR Drilling Group)  
3. ADDRESS OF OPERATOR: 8055 Ea. Tufts Ave. Pkwy, Denver, Colo. 80237  
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements):  
At surface 660' FNL, 1780' FWL Sec.25-T39S-R25E (NE/4-NW/4)  
At top prod. interval reported below  
At total depth

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

North Flodine Federal

9. WELL NO.

#1-25

10. FIELD AND POOL, OR WILDCAT

Wildcat

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA

Sec.25-T39S-R25E

12. COUNTY OR PARISH

San Juan

13. STATE

UTAH

14. PERMIT NO.  
43-037-31369

DATE ISSUED

12-8-87

15. DATE SPUDDED 12-20-87 16. DATE T.D. REACHED 1-11-88 17. DATE COMPL. (Ready to prod.) Not Completed 18. ELEVATIONS (OF, RKB, RT, GR, ETC.) 5245' RKB-5233' GL 19. ELEV. CASINGHEAD

20. TOTAL DEPTH, MD & TVD 6100' 21. PLUG BACK T.D., MD & TVD Surface 22. IF MULTIPLE COMPL., HOW MANY? N/A 23. INTERVALS DRILLED BY ROTARY TOOLS CABLE TOOLS A11 6100'

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)\* None 25. WAS DIRECTIONAL SURVEY MADE No

26. TYPE ELECTRIC AND OTHER LOGS RUN Dual Laterolog w/Micro-SFL; BHC Sonic; Compen. Neutron-Litho-Density 27. WAS WELL CORED Yes

| 28. CASING RECORD (Report all strings set in well) |                 |                |           |   |               |
|--|-----------------|----------------|-----------|---|---------------|
| CASING SIZE  | WEIGHT, LB./FT. | DEPTH SET (MD) | HOLE SIZE | CEMENTING RECORD                              | AMOUNT PULLED |
| 13 3/8"  | 61#/ft          | 103'           | 17 1/2"   | 150 sx (177 ft <sup>3</sup> ) C1"B" w/CaCl2   | none          |
| 9 5/8"   | 36#/ft          | 2002'          | 12 1/4"   | 1100 sx (1298 ft <sup>3</sup> ) C1"B" w/CaCl2 | "             |

| 29. LINER RECORD |          |             |               |             | 30. TUBING RECORD |                |                 |
|------------------|----------|-------------|---------------|-------------|-------------------|----------------|-----------------|
| SIZE             | TOP (MD) | BOTTOM (MD) | SACKS CEMENT* | SCREEN (MD) | SIZE              | DEPTH SET (MD) | PACKER SET (MD) |
| N/A              |          |             |               |             | N/A               |                |                 |

| 31. PERFORATION RECORD (Interval, size and number) |  |  |  | 32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC. |                                  |
|--|--|--|--|--|----------------------------------|
|  |  |  |  | DEPTH INTERVAL (MD)                            | AMOUNT AND KIND OF MATERIAL USED |
| N/A  |  |  |  | N/A  |                                  |

| 33. PRODUCTION        |                 |  |                         |          |            |                                    |               |
|-----------------------|-----------------|--|-------------------------|----------|------------|------------------------------------|---------------|
| DATE FIRST PRODUCTION |                 | PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) |                         |          |            | WELL STATUS (Producing or shut-in) |               |
| N/A                   |                 |  |                         |          |            | P&A 1-15-88                        |               |
| DATE OF TEST          | HOURS TESTED    | CHOKE SIZE   | PROD'N. FOR TEST PERIOD | OIL—BBL. | GAS—MCF.   | WATER—BBL.                         | GAS-OIL RATIO |
|                       |                 |  |                         |          |            |                                    |               |
| FLOW. TUBING PRESS.   | CASING PRESSURE | CALCULATED 24-HOUR RATE  | OIL—BBL.                | GAS—MCF. | WATER—BBL. | OIL GRAVITY-API (CORR.)            |               |
|                       |                 |  |                         |          |            |                                    |               |

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) TEST WITNESSED BY

35. LIST OF ATTACHMENTS

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records  
SIGNED Shady Burr TITLE Drilling Manager DATE 1-15-88

\*(See Instructions and Spaces for Additional Data on Reverse Side)

**RECEIVED**

JAN 19 1988

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING  
3 TRIAD CENTER, SUITE 350  
SALT LAKE CITY, UT 84180-1203

DIVISION OF  
OIL, GAS & MINING

REPORT OF WATER ENCOUNTERED DURING DRILLING **012502**

Well Name & Number North Flodine Federal #1-25

Operator Phillips Petroleum Co. Address 8055 Ea. Tufts Ave. Pkwy

Contractor Four Corners Drilling Co. Address Denver, Colorado 80237

Location NE 1/4 NW 1/4 Sec. 25 T. 39S R. 25E County San Juan

Water Sands

|    | <u>Depth</u> |    | <u>Volume</u>                    | <u>Quality</u> |
|----|--------------|----|----------------------------------|----------------|
|    | From         | To | Flow Rate or Head                | Fresh or Salty |
| 1. | 3497'        |    | Too small to measure*(see below) | Salty          |
| 2. |              |    |                                  |                |
| 3. |              |    |                                  |                |
| 4. |              |    |                                  |                |
| 5. |              |    |                                  |                |

(Continue on reverse side if necessary)

Formation Tops

Remarks \*Noticed slight flow while drilling @ 3497' with MW @ 9.4 ppg. Chloride content of drlg fluid increased to 10,500 ppm. Raised MW to 9.6 & stopped all flow.

NOTE: (a) Report on this form as provided for in Rule 806, Oil and Gas Conservation General Rules.

(b) If a water analysis has been made of the above reported zone, please forward a copy along with this form.

COMPANY: PHILLIPS PETROLEUM UT ACCOUNT # \_\_\_\_\_ SUSPENSE DATE: 2-27-88

WELL NAME: NORTH FLODINE FED #1-25

TELEPHONE CONTACT DOCUMENTATION

API #: 43 037 31369

CONTACT NAME: RANDY

PAUL DEAN

SEC, TWP, RNG: 39 S 25 E 25

CONTACT TELEPHONE NO.: 1-307-237-3791

303-850-3269

SUBJECT: NEED LOG TOPS

WILL CALL BACK

9:40 1-22-88

(Use attachments if necessary)

RESULTS: PAUL WILL SEND LOG TOPS

2-10-88 8:40

(Use attachments if necessary)

CONTACTED BY: \_\_\_\_\_

DATE: \_\_\_\_\_



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPPLICATE  
(Other instructions on reverse side)

Budget Bureau No. 1004-0135  
Expires August 31, 1985

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.  
Use "APPLICATION FOR PERMIT" for each proposal.)

|   |   |                                  |                   |   |  |
|---|---|----------------------------------|-------------------|---|--|
| 1. <input checked="" type="checkbox"/> OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER   |   | FEB 16 1988                      |                   | UNIT AGREEMENT NAME   |  |
| 2. NAME OF OPERATOR<br>Phillips Petroleum Company   |   | DIVISION OF<br>OIL, GAS & MINING |                   | 3. FARM OR LEASE NAME<br>N. Flodine Federal                           |  |
| 3. ADDRESS OF OPERATOR<br>152 N. Durbin, 2nd Floor, Casper, Wyoming 82601   |   |                                  |                   | 4. WELL NO.<br>1-25   |  |
| 4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*<br>See also space 17 below.)<br>At surface 660' FNL & 1780' FWL, NE NW |   |                                  |                   | 10. FIELD AND POOL, OR WILDCAT<br>Wildcat                             |  |
| API #43-037-31369   |   |                                  |                   | 11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA<br>Sec. 25-T39S-R25E |  |
| 14. PERMIT NO.  | 15. ELEVATIONS (Show whether DF, RT, CR, etc.)<br>GR 5255', RKB 5267' | 12. COUNTY OR PARISH<br>San Juan | 13. STATE<br>Utah |   |  |

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

SUBSEQUENT REPORT OF:

TEST WATER SHUT-OFF ☐  
FRACTURE TREAT ☐  
SHOOT OR ACIDIZE ☐  
REPAIR WELL ☐  
(Other) ☐

PCLL OR ALTER CASING ☐  
MULTIPLE COMPLETE ☐  
ABANDON\* ☐  
CHANGE PLANS ☐

WATER SHUT-OFF ☐  
FRACTURE TREATMENT ☐  
SHOOTING OR ACIDIZING ☐  
(Other) ☐

REPAIRING WELL ☐  
ALTERING CASING ☐  
ABANDONMENT\* ☐

STATUS REPORT-January 1988 ☒

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

CONFIDENTIAL INFORMATION

Drld to 5810'. Cut Core #1 5810-5870'. Run DST #1 5846-5870', rec 182' wtr, 25' mud. Drld to 6040'. Run DST #2 5980-6040', rec 157' wtr, 37.8' mud. Drld to TD 6100', 1/10/88. Logged well. Decided to plug.

WIH open ended to 5994'.

Set 125 sx Class B Cmt Plug from 5994-5694'. COOH to 3617'.

Set 120 sx Class B Cmt Plug from 3617-3278'. Tag cmt at 3385'. COOH to 2165'.

Set 150 sx Class B Cmt Plug from 2154-1740'. Tag cmt at 1949'. COOH to 1720'.

Set 20 sx Class B Cmt Plug from 60' to 15'. Filled rat and mouse holes w/

10 sx Class B Cmt. Released Rig 1/13/88. Installed Dry Hole Marker 2'

above GL. Plugged and Abandoned 1/13/88. FINAL REPORT.

4-BLM, Farmington, NM  
2-Ocean O&G CC, SLC, UT  
1-File RC

18. I hereby certify that the foregoing is true and correct

SIGNED D. C. GILL

TITLE Area Manager

DATE February 11, 1988

(This space for Federal or State office use)

APPROVED BY \_\_\_\_\_  
CONDITIONS OF APPROVAL, IF ANY:

TITLE \_\_\_\_\_

DATE \_\_\_\_\_

\*See Instructions on Reverse Side

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

SUBMIT IN DUPLICATE

Form approved.  
Budget Bureau No. 1004-0137  
Expires August 31, 1985

WELL COMPLETION OR RECOMPLETION REPORT AND LOG \*

|   |  |  |  |   |  |   |  |  |  |  |  |   |  |  |  |                                       |  |   |  |   |  |   |  |                           |  |
|---|--|--|--|---|--|---|--|--|--|--|--|---|--|--|--|---------------------------------------|--|---|--|---|--|---|--|---------------------------|--|
| 1a. TYPE OF WELL:<br>OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> DRY <input checked="" type="checkbox"/>  |  | 1b. TYPE OF COMPLETION:<br>NEW WELL <input type="checkbox"/> WORK OVER <input type="checkbox"/> DEEP-EN <input type="checkbox"/> PIPE BACK <input type="checkbox"/> DIFF. CENTER <input type="checkbox"/> Other <input type="checkbox"/> |  | 2. NAME OF OPERATOR<br>Phillips Petroleum Co. (Atten: NWR Drilling Group) |  | 3. ADDRESS OF OPERATOR<br>8055 Ea. Tufts Ave. Pkwy, Denver, Colo. 80237 |  | 4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)<br>At surface 660' FNL, 1780' FWL Sec.25-T39S-R25E (NE/4-NW/4)<br>At top prod. interval reported below<br>At total depth |  | 5. LEASE DERIVATION AND SERIAL NO.<br>U-46954 PA<br>021919 |  | 6. IF INDIAN, ALLOTTEE OR TRIBE NAME<br>North Flodine Federal |  | 7. LEASE AGREEMENT NAME<br>North Flodine Federal |  | 8. WELL NO.<br>#1-25                  |  | 9. FIELD AND POOL, OR WILDCAT<br>Wildcat  |  | 10. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA<br>Sec.25-T39S-R25E |  | 11. COUNTY OR PARISH<br>San Juan  |  | 12. STATE<br>UTAH         |  |
| 13. DATE SPUDDED<br>12-20-87  |  | 16. DATE T.D. REACHED<br>1-11-88   |  | 17. DATE COMPL. (Ready to prod.)<br>Not Completed                         |  | 18. ELEVATIONS (OF, RKB, RT, CR, ETC.)<br>5245' RKB-5233' GL            |  | 19. ELEV. CASINGHEAD   |  | 20. TOTAL DEPTH, MD & TVD<br>6100'                         |  | 21. PLUG BACK T.D., MD & TVD<br>Surface                       |  | 22. IF MULTIPLE COMPL., HOW MANY?<br>N/A         |  | 23. INTERVALS DRILLED BY<br>A11 6100' |  | 24. PRODUCING INTERVAL(S) OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)<br>None |  | 25. WAS DIRECTIONAL SURVEY MADE<br>No                                 |  | 26. TYPE ELECTRIC AND OTHER LOGS RUN<br>Dual Laterolog w/Micro-SFL; BHC Sonic; Compens. Neutron-Litho Density |  | 27. WAS WELL CORED<br>Yes |  |
| 28. CASING RECORD (Report all strings set in well)  |  |  |  |   |  |   |  |  |  |  |  |   |  |  |  |                                       |  |   |  |   |  |   |  |                           |  |
| CASING SIZE   |  | WEIGHT, LB./FT.  |  | DEPTH SET (MD)  |  | HOLE SIZE   |  | CEMENTING RECORD   |  | AMOUNT PULLED  |  |   |  |  |  |                                       |  |   |  |   |  |   |  |                           |  |
| 13 3/8"   |  | 61#/ft   |  | 103'  |  | 17 1/2"   |  | 150 sx (177 ft <sup>3</sup> ) C1"B" w/CaCl2  |  | none   |  |   |  |  |  |                                       |  |   |  |   |  |   |  |                           |  |
| 9 5/8"  |  | 36#/ft   |  | 2002'   |  | 12 1/4"   |  | 1100 sx (1298 ft <sup>3</sup> ) C1"B" w/CaCl2  |  | "  |  |   |  |  |  |                                       |  |   |  |   |  |   |  |                           |  |
| 29. LINER RECORD  |  |  |  |   |  |   |  |  |  |  |  |   |  |  |  |                                       |  |   |  |   |  |   |  |                           |  |
| SIZE  |  | TOP (MD)   |  | BOTTOM (MD)   |  | SACKS CEMENT*   |  | SCREEN (MD)  |  | SIZE   |  | DEPTH SET (MD)  |  | PACKER SET (MD)                                  |  |                                       |  |   |  |   |  |   |  |                           |  |
| N/A   |  |  |  |   |  |   |  |  |  | N/A  |  |   |  |  |  |                                       |  |   |  |   |  |   |  |                           |  |
| 30. TUBING RECORD   |  |  |  |   |  |   |  |  |  |  |  |   |  |  |  |                                       |  |   |  |   |  |   |  |                           |  |
| SIZE  |  | TOP (MD)   |  | BOTTOM (MD)   |  | SACKS CEMENT*   |  | SCREEN (MD)  |  | SIZE   |  | DEPTH SET (MD)  |  | PACKER SET (MD)                                  |  |                                       |  |   |  |   |  |   |  |                           |  |
| N/A   |  |  |  |   |  |   |  |  |  | N/A  |  |   |  |  |  |                                       |  |   |  |   |  |   |  |                           |  |
| 31. PERFORATION RECORD (Interval, size and number)  |  |  |  |   |  |   |  |  |  |  |  |   |  |  |  |                                       |  |   |  |   |  |   |  |                           |  |
| N/A   |  |  |  |   |  |   |  |  |  |  |  |   |  |  |  |                                       |  |   |  |   |  |   |  |                           |  |
| 32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.  |  |  |  |   |  |   |  |  |  |  |  |   |  |  |  |                                       |  |   |  |   |  |   |  |                           |  |
| DEPTH INTERVAL (MD)   |  | AMOUNT AND KIND OF MATERIAL USED   |  |   |  |   |  |  |  |  |  |   |  |  |  |                                       |  |   |  |   |  |   |  |                           |  |
| N/A   |  |  |  |   |  |   |  |  |  |  |  |   |  |  |  |                                       |  |   |  |   |  |   |  |                           |  |
| 33. PRODUCTION  |  |  |  |   |  |   |  |  |  |  |  |   |  |  |  |                                       |  |   |  |   |  |   |  |                           |  |
| DATE FIRST PRODUCTION   |  | PRODUCTION METHOD (Flowing, gas lift, pumping—else and type of pump)   |  |   |  |   |  |  |  |  |  | WELL STATUS (Producing or shut-in) D & A                      |  |  |  |                                       |  |   |  |   |  |   |  |                           |  |
| N/A...  |  |  |  |   |  |   |  |  |  |  |  |   |  |  |  |                                       |  |   |  |   |  |   |  |                           |  |
| DATE OF TEST  |  | HOURS TESTED   |  | CHOKER SIZE   |  | PROD'N. FOR TEST PERIOD   |  | OIL—BSL.   |  | GAS—MCF.   |  | WATER—BSL.  |  | GAS-OIL RATIO                                    |  |                                       |  |   |  |   |  |   |  |                           |  |
|   |  |  |  |   |  |   |  |  |  |  |  |   |  |  |  |                                       |  |   |  |   |  |   |  |                           |  |
| FLOW, TUBING PRESS.   |  | CASING PRESSURE  |  | CALCULATED 24-HOUR RATE   |  | OIL—BSL.  |  | GAS—MCF.   |  | WATER—BSL.   |  | OIL GRAVITY-API (CORR.)                                       |  |  |  |                                       |  |   |  |   |  |   |  |                           |  |
|   |  |  |  |   |  |   |  |  |  |  |  |   |  |  |  |                                       |  |   |  |   |  |   |  |                           |  |
| 34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)  |  |  |  |   |  |   |  |  |  |  |  |   |  |  |  |                                       |  |   |  |   |  |   |  |                           |  |
| TEST WITNESSED BY   |  |  |  |   |  |   |  |  |  |  |  |   |  |  |  |                                       |  |   |  |   |  |   |  |                           |  |
| 35. LIST OF ATTACHMENTS   |  |  |  |   |  |   |  |  |  |  |  |   |  |  |  |                                       |  |   |  |   |  |   |  |                           |  |
| 36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records |  |  |  |   |  |   |  |  |  |  |  |   |  |  |  |                                       |  |   |  |   |  |   |  |                           |  |
| SIGNED  |  | Drilling Manager   |  |   |  |   |  |  |  |  |  | DATE 1-15-88  |  |  |  |                                       |  |   |  |   |  |   |  |                           |  |

\*(See Instructions and Spaces for Additional Data on Reverse Side)

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

37. SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof; cored intervals; and all drill-stem, tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries):

| FORMATION      | TOP   | BOTTOM | DESCRIPTION, CONTENTS, ETC.   | NAME            | MEAS. DEPTH | TOP<br>TRUE<br>VERT. DEPTH |
|----------------|-------|--------|---|-----------------|-------------|----------------------------|
| <u>CORES:</u>  |       |        |   |                 |             |                            |
| Upper Ismay    | 5810' | 5870'  | Cored 60', recovered 60'. Anhydrite, shale dolomite and limestone   | Shinarump       | 2799'       |                            |
|                |       |        |   | DeChilly        | 2996'       |                            |
|                |       |        |   | Hermosa         | 4802'       |                            |
|                |       |        |   | Upper Ismay     | 5737'       |                            |
|                |       |        |   | Hovenweep Shale | 5864'       |                            |
|                |       |        |   | Lower Ismay     | 5867'       |                            |
|                |       |        |   | Gothic Shale    | 5926'       |                            |
|                |       |        |   | Desert Creek    | 5947'       |                            |
|                |       |        |   | Chimney Rock    | 6040'       |                            |
|                |       |        |   | Akah Salt       | 6060'       |                            |
|                |       |        |   | Total Depth     | 6100'       |                            |
| <u>DST #1:</u> |       |        |   |                 |             |                            |
| Upper Ismay    | 5846' | 5870'  | Used 200' water cushion.<br>IHP<br>IF (5-mins) 2978 psi<br>ISI (89-mins) 115 psi<br>FF (30-mins) 154 psi<br>FSI (120 mins) 112 psi<br>FHP 126 psi<br>Recovered 182' water cushion & 25' drlg mud                    |                 |             |                            |
| <u>DST #2:</u> |       |        |   |                 |             |                            |
| Desert Creek   |       |        | Used 157' water cushion.<br>IHP 3171 psi<br>IF (5-mins) 110 psi<br>ISI (90-mins) 441 psi<br>FF (60-mins) 121 psi<br>FSI Press. (180-mins) 747 psi<br>FHP 3144 psi<br>Recovered 157' water cushion & 37.8' drlg mud. |                 |             |                            |

REPORT NO.  
101024

PAGE NO. 1

TEST DATE:

08-JAN-88

## WELL PERFORMANCE

### TESTING™ REPORT

A Production System Analysis (NODAL™)  
Based On Model Verified™ Interpretation

FLOPETROL JOHNSTON

Schlumberger

Company: PHILLIPS PETROLEUM CO.

Well: NORTH FLODINE FEDERAL #1-25

#### TEST IDENTIFICATION

Test Type ..... MFE OH DST  
Test No. .... 1  
Formation ..... LOWER ISMAY  
Test Interval (ft) ..... 5846 - 5870  
Reference Depth ..... KELLY BUSHING

#### WELL LOCATION

Field ..... PARADOX BASIN  
County ..... SAN JUAN  
State ..... UTAH  
Sec/Twn/Rng ..... S25T39SR25E  
Elevation (ft) ..... 5255

#### HOLE CONDITIONS

Total Depth (MD/TUD) (ft) .... 5870 / 5870  
Hole Size (in) ..... 8 3/4  
Casing/Liner I.D. (in) .....  
Perf'd Interval/Net Pay (ft).. -- / 5  
Shot Density/Diameter (in) ...

#### MUD PROPERTIES

Mud Type ..... N.D. WEIGHTED  
Mud Weight (lb/gal) ..... 9.7  
Mud Resistivity (ohm.m) ..... 0.7 @ 60 DEG. F  
Filtrate Resistivity (ohm.m).. 0.65 @ 60 DEG.F  
Filtrate Chlorides (ppm) ..... 10000

#### INITIAL TEST CONDITIONS

Initial Hydrostatic (psi) .... 2978  
Gas Cushion Type ..... NONE  
Surface Pressure (psi) ..... --  
Liquid Cushion Type ..... WATER  
Cushion Length (ft) ..... 200

#### TEST STRING CONFIGURATION

Pipe Length (ft)/I.D. (in) ... 5305 / 3.8  
Collar Length (ft)/I.D. (in).. 91/3.88489/2.25  
Packer Depths (ft) ..... 5846  
Bottomhole Choke Size (in) ... 15/16  
Gauge Depth (ft)/Type ..... 5852/MECHANICAL

#### NET PIPE RECOVERY

| Volume  | Fluid Type  | Properties       |
|---------|-------------|------------------|
| 182 FT. | WATER CUSH. | 10 @ 70 DEG. F.  |
|         |             | FRESH            |
| 25 FT.  | DRLG. MUD   | 0.39 @ 78 DEG. F |
|         |             | 12000 PPM CL.    |

#### NET SAMPLE CHAMBER RECOVERY

| Volume       | Fluid Type | Properties        |
|--------------|------------|-------------------|
| 0.014 SCF    | GAS        |                   |
| 2400 CC      | MUD        | 0.39 @ 78 DEG. F. |
|              |            | 12000 PPM CL.     |
| Pressure: 30 |            | GOR: GLR:         |

#### INTERPRETATION RESULTS

Model of Behavior .....  
Fluid Type Used for Analysis ..  
Reservoir Pressure (psi) .....  
Transmissibility (md.ft/cp) ..  
Effective Permeability (md) ..  
Skin Factor/Damage Ratio .....  
Storativity Ratio .....  
Interporosity Flow Coeff. ....  
Distance to an Anomaly (ft) ..  
Radius of Investigation (ft)..  
Potentiometric Surface (ff) ..

#### ROCK/FLUID/WELLBORE PROPERTIES

Oil Density (deg. API) .....  
Basic Solids (%) .....  
Gas Gravity .....  
Water Cut (%) .....  
Viscosity (cp) .....  
Total Compressibility (1/psi).  
Porosity (%) ..... 0 - 5  
Reservoir Temperature (F) .... 122  
Form.Vol.Factor (bbl/STB) ....

PRODUCTION RATE DURING TEST: -

COMMENTS:

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JUN 15 1988

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OIL, GAS & MINING

REPORT NO.  
101024

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## SEQUENCE OF EVENTS

FLOPETROL JOHNSTON

Schlumberger

| EVENT NO. | DATE   | TIME (HR:MIN) | DESCRIPTION              | ELAPSED TIME (MINS) | BHP (PSIA) | BLOW (IN. -H2O) |
|-----------|--------|---------------|--------------------------|---------------------|------------|-----------------|
| 1         | 1-8-88 | 1313          | SET PACKERS              | -1.00               | 2978       |                 |
| 2         |        | 1316          | OPENED TOOL-1/4" CHOKE   | 0.00                | 115        | SURF. BLOW      |
| 3         |        | 1321          | FINISHED FLOW            | 5.12                | 115        |                 |
| 4         |        | 1321          | START INITIAL SHUT-IN    | 5.15                | 101        | NO BLOW         |
| 5         |        | 1451          | FINISHED SHUT-IN         | 94.20               | 154        | NO BLOW         |
| 6         |        | 1453          | RE-OPENED TOOL           | 96.00               | 115        | NO BLOW         |
|           |        |               | NO BLOW THROUGHOUT FINAL |                     |            |                 |
|           |        |               | FLOW PERIOD              |                     |            |                 |
| 7         |        | 1523          | FINISHED FLOW            | 126.20              | 112        | NO BLOW         |
| 8         |        | 1523          | START FINAL SHUT-IN      | 126.30              | 91         | NO BLOW         |
| 9         |        | 1721          | FINISHED SHUT-IN         | 245.20              | 126        |                 |
| 10        |        | 1726          | PULLED PACKERS LOOSE     | 246.00              | 2971       |                 |
|           |        |               | DID NOT REVERSE OUT.     |                     |            |                 |

# BOTTOMHOLE PRESSURE LOG

FIELD REPORT NO. 101024

COMPANY : PHILLIPS PETROLEUM

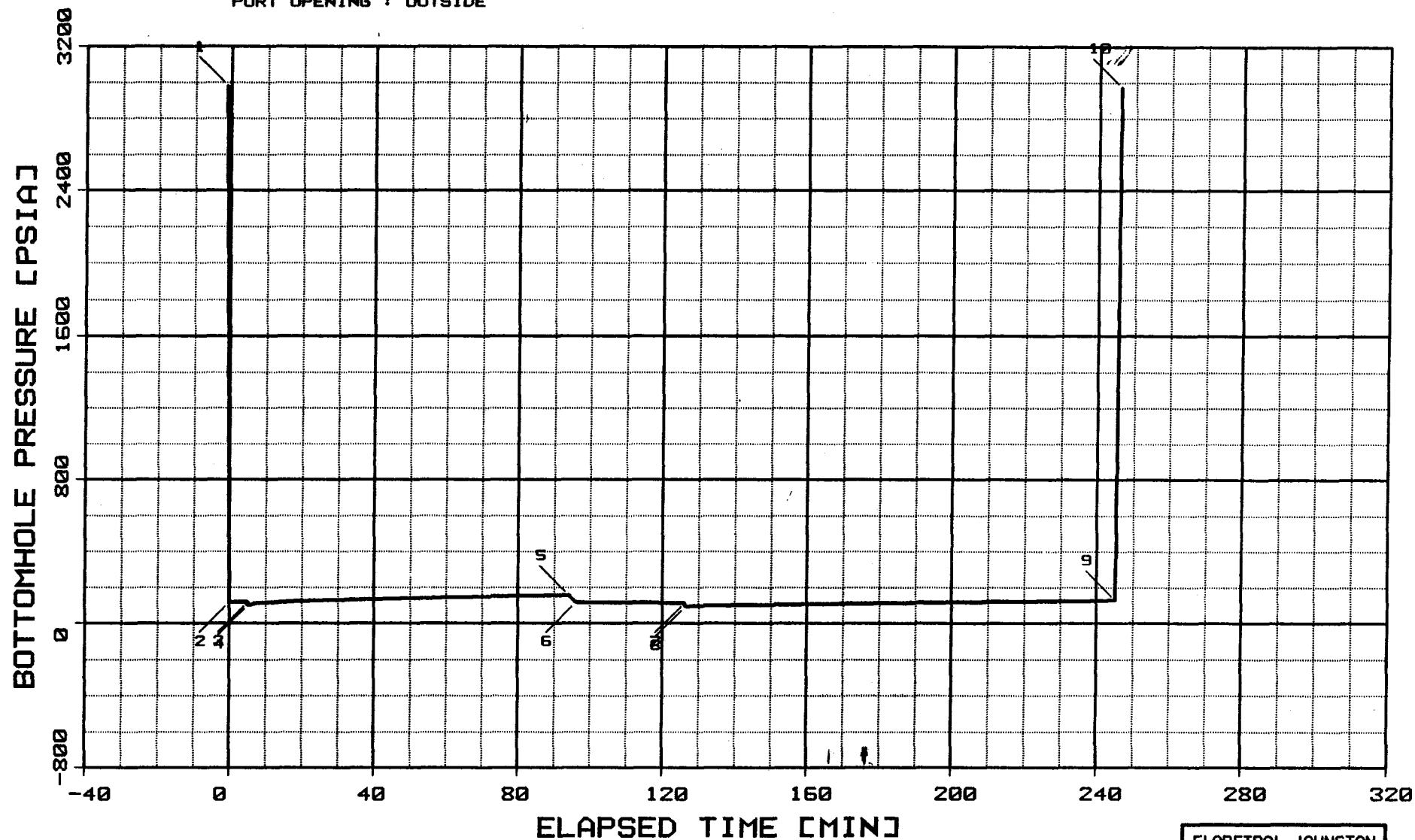
INSTRUMENT NO. J-1238

WELL : NORTH FLODINE FEDERAL 1-25

DEPTH : 5852 FT

CAPACITY : 0 PSI

PORT OPENING : OUTSIDE



\*\*\*\*\*  
 \* WELL TEST DATA PRINTOUT \*  
 \*\*\*\*\*

FIELD REPORT # : 101024

COMPANY : PHILLIPS PETROLEUM  
 WELL : NORTH FLODINE FEDERAL 1-25

INSTRUMENT # : J-1238  
 CAPACITY [PSI] : 0.  
 DEPTH [FT] : 5852.0  
 PORT OPENING : OUTSIDE  
 TEMPERATURE [DEG F] : 122.0

LABEL POINT INFORMATION  
 \*\*\*\*\*

| #   | TIME<br>OF DAY DATE<br>HH:MM:SS DD-MM | EXPLANATION     | ELAPSED<br>TIME, MIN | BOT HOLE<br>PRESSURE<br>PSIA |
|-----|---------------------------------------|-----------------|----------------------|------------------------------|
| *** | *****                                 | *****           | *****                | *****                        |
| 1   | 13:15: 0 8-JA                         | HYDROSTATIC MUD | -1.00                | 2978                         |
| 2   | 13:16: 0 8-JA                         | START FLOW      | 0.00                 | 115                          |
| 3   | 13:21: 7 8-JA                         | END FLOW        | 5.12                 | 115                          |
| 4   | 13:21: 9 8-JA                         | START SHUT-IN   | 5.15                 | 101                          |
| 5   | 14:50:12 8-JA                         | END SHUT-IN     | 94.20                | 154                          |
| 6   | 14:52: 0 8-JA                         | START FLOW      | 96.00                | 115                          |
| 7   | 15:22:12 8-JA                         | END FLOW        | 126.20               | 112                          |
| 8   | 15:22:18 8-JA                         | START SHUT-IN   | 126.30               | 91                           |
| 9   | 17:21:12 8-JA                         | END SHUT-IN     | 245.20               | 126                          |
| 10  | 17:22: 0 8-JA                         | HYDROSTATIC MUD | 246.00               | 2971                         |

SUMMARY OF FLOW PERIODS  
 \*\*\*\*\*

| PERIOD | START<br>ELAPSED<br>TIME, MIN | END<br>ELAPSED<br>TIME, MIN | DURATION<br>MIN | START<br>PRESSURE<br>PSIA | END<br>PRESSURE<br>PSIA |
|--------|-------------------------------|-----------------------------|-----------------|---------------------------|-------------------------|
| *****  | *****                         | *****                       | *****           | *****                     | *****                   |
| 1      | 0.00                          | 5.12                        | 5.12            | 115                       | 115                     |
| 2      | 96.00                         | 126.20                      | 30.20           | 115                       | 112                     |

SUMMARY OF SHUTIN PERIODS  
 \*\*\*\*\*

| PERIOD | START<br>ELAPSED<br>TIME, MIN | END<br>ELAPSED<br>TIME, MIN | DURATION<br>MIN | START<br>PRESSURE<br>PSIA | END<br>PRESSURE<br>PSIA | FINAL FLOW<br>PRESSURE<br>PSIA | PRODUCING<br>TIME, MIN |
|--------|-------------------------------|-----------------------------|-----------------|---------------------------|-------------------------|--------------------------------|------------------------|
| *****  | *****                         | *****                       | *****           | *****                     | *****                   | *****                          | *****                  |
| 1      | 5.15                          | 94.20                       | 89.05           | 101                       | 154                     | 115                            | 5.12                   |
| 2      | 126.30                        | 245.20                      | 118.90          | 91                        | 126                     | 112                            | 35.32                  |

## TEST PHASE : FLOW PERIOD # 1

| TIME<br>OF DAY<br>HH:MM:SS | DATE<br>DD-MM | ELAPSED<br>TIME,MIN | DELTA<br>TIME,MIN | BOT HOLE<br>PRESSURE<br>PSIA |
|----------------------------|---------------|---------------------|-------------------|------------------------------|
| *****                      | *****         | *****               | *****             | *****                        |

|          |      |      |      |     |
|----------|------|------|------|-----|
| 13:16: 0 | 8-JA | 0.00 | 0.00 | 115 |
| 13:21: 0 | 8-JA | 5.00 | 5.00 | 115 |
| 13:21: 7 | 8-JA | 5.12 | 5.12 | 115 |

## TEST PHASE : SHUTIN PERIOD # 1

FINAL FLOW PRESSURE [PSIA] = 115

PRODUCING TIME [MIN] = 5.12

| TIME<br>OF DAY<br>HH:MM:SS | DATE<br>DD-MM | ELAPSED<br>TIME,MIN | DELTA<br>TIME,MIN | BOT HOLE<br>PRESSURE<br>PSIA | DELTA P<br>PSI | LOG<br>HORNER<br>TIME |
|----------------------------|---------------|---------------------|-------------------|------------------------------|----------------|-----------------------|
| *****                      | *****         | *****               | *****             | *****                        | *****          | *****                 |

|          |      |       |       |     |     |       |
|----------|------|-------|-------|-----|-----|-------|
| 13:21: 9 | 8-JA | 5.15  | 0.00  | 101 | -14 |       |
| 13:22: 9 | 8-JA | 6.15  | 1.00  | 102 | -13 | 0.787 |
| 13:23: 9 | 8-JA | 7.15  | 2.00  | 108 | -7  | 0.551 |
| 13:24: 9 | 8-JA | 8.15  | 3.00  | 109 | -6  | 0.432 |
| 13:25: 9 | 8-JA | 9.15  | 4.00  | 110 | -5  | 0.358 |
| 13:26: 9 | 8-JA | 10.15 | 5.00  | 111 | -4  | 0.306 |
| 13:27: 9 | 8-JA | 11.15 | 6.00  | 113 | -2  | 0.268 |
| 13:28: 9 | 8-JA | 12.15 | 7.00  | 113 | -2  | 0.238 |
| 13:29: 9 | 8-JA | 13.15 | 8.00  | 115 | 0   | 0.215 |
| 13:30: 9 | 8-JA | 14.15 | 9.00  | 116 | 1   | 0.196 |
| 13:31: 9 | 8-JA | 15.15 | 10.00 | 117 | 2   | 0.180 |
| 13:33: 9 | 8-JA | 17.15 | 12.00 | 119 | 4   | 0.154 |
| 13:35: 9 | 8-JA | 19.15 | 14.00 | 120 | 6   | 0.135 |
| 13:37: 9 | 8-JA | 21.15 | 16.00 | 121 | 7   | 0.121 |
| 13:39: 9 | 8-JA | 23.15 | 18.00 | 123 | 9   | 0.109 |
| 13:41: 9 | 8-JA | 25.15 | 20.00 | 123 | 9   | 0.099 |
| 13:43: 9 | 8-JA | 27.15 | 22.00 | 125 | 11  | 0.091 |
| 13:45: 9 | 8-JA | 29.15 | 24.00 | 126 | 12  | 0.084 |
| 13:47: 9 | 8-JA | 31.15 | 26.00 | 128 | 13  | 0.078 |
| 13:49: 9 | 8-JA | 33.15 | 28.00 | 129 | 14  | 0.073 |
| 13:51: 9 | 8-JA | 35.15 | 30.00 | 130 | 15  | 0.068 |
| 13:56: 9 | 8-JA | 40.15 | 35.00 | 132 | 17  | 0.059 |
| 14: 1: 9 | 8-JA | 45.15 | 40.00 | 135 | 20  | 0.052 |
| 14: 6: 9 | 8-JA | 50.15 | 45.00 | 136 | 22  | 0.047 |
| 14:11: 9 | 8-JA | 55.15 | 50.00 | 138 | 24  | 0.042 |
| 14:16: 9 | 8-JA | 60.15 | 55.00 | 141 | 27  | 0.039 |
| 14:21: 9 | 8-JA | 65.15 | 60.00 | 143 | 28  | 0.036 |
| 14:26: 9 | 8-JA | 70.15 | 65.00 | 145 | 30  | 0.033 |
| 14:31: 9 | 8-JA | 75.15 | 70.00 | 147 | 32  | 0.031 |
| 14:36: 9 | 8-JA | 80.15 | 75.00 | 149 | 34  | 0.029 |
| 14:41: 9 | 8-JA | 85.15 | 80.00 | 151 | 36  | 0.027 |
| 14:46: 9 | 8-JA | 90.15 | 85.00 | 153 | 38  | 0.025 |
| 14:50:12 | 8-JA | 94.20 | 89.05 | 154 | 39  | 0.024 |



## TEST PHASE : FLOW PERIOD # 2

| TIME<br>OF DAY | DATE  | ELAPSED<br>TIME, MIN | DELTA<br>TIME, MIN | BOT HOLE<br>PRESSURE<br>PSIA |
|----------------|-------|----------------------|--------------------|------------------------------|
| HH:MM:SS       | DD-MM |                      |                    |                              |
| 14:52: 0       | 8-JA  | 96.00                | 0.00               | 115                          |
| 14:57: 0       | 8-JA  | 101.00               | 5.00               | 114                          |
| 15: 2: 0       | 8-JA  | 106.00               | 10.00              | 114                          |
| 15: 7: 0       | 8-JA  | 111.00               | 15.00              | 113                          |
| 15:12: 0       | 8-JA  | 116.00               | 20.00              | 113                          |
| 15:17: 0       | 8-JA  | 121.00               | 25.00              | 112                          |
| 15:22: 0       | 8-JA  | 126.00               | 30.00              | 112                          |
| 15:22:12       | 8-JA  | 126.20               | 30.20              | 112                          |

TEST PHASE : SHUTIN PERIOD # 2  
 FINAL FLOW PRESSURE [PSIA] = 112  
 PRODUCING TIME [MIN] = 35.32

| TIME<br>OF DAY | DATE  | ELAPSED<br>TIME, MIN | DELTA<br>TIME, MIN | BOT HOLE<br>PRESSURE<br>PSIA | DELTA P<br>PSI | LOG<br>HORNER<br>TIME |
|----------------|-------|----------------------|--------------------|------------------------------|----------------|-----------------------|
| HH:MM:SS       | DD-MM |                      |                    |                              |                |                       |
| 15:22:18       | 8-JA  | 126.30               | 0.00               | 91                           | -21            |                       |
| 15:23:18       | 8-JA  | 127.30               | 1.00               | 92                           | -20            | 1.560                 |
| 15:24:18       | 8-JA  | 128.30               | 2.00               | 95                           | -17            | 1.271                 |
| 15:25:18       | 8-JA  | 129.30               | 3.00               | 95                           | -17            | 1.106                 |
| 15:26:18       | 8-JA  | 130.30               | 4.00               | 96                           | -16            | 0.993                 |
| 15:27:18       | 8-JA  | 131.30               | 5.00               | 96                           | -16            | 0.907                 |
| 15:28:18       | 8-JA  | 132.30               | 6.00               | 97                           | -15            | 0.838                 |
| 15:29:18       | 8-JA  | 133.30               | 7.00               | 97                           | -15            | 0.781                 |
| 15:30:18       | 8-JA  | 134.30               | 8.00               | 97                           | -15            | 0.734                 |
| 15:31:18       | 8-JA  | 135.30               | 9.00               | 97                           | -15            | 0.692                 |
| 15:32:18       | 8-JA  | 136.30               | 10.00              | 97                           | -15            | 0.656                 |
| 15:34:18       | 8-JA  | 138.30               | 12.00              | 98                           | -14            | 0.596                 |
| 15:36:18       | 8-JA  | 140.30               | 14.00              | 99                           | -13            | 0.547                 |
| 15:38:18       | 8-JA  | 142.30               | 16.00              | 99                           | -13            | 0.506                 |
| 15:40:18       | 8-JA  | 144.30               | 18.00              | 100                          | -12            | 0.472                 |
| 15:42:18       | 8-JA  | 146.30               | 20.00              | 100                          | -12            | 0.442                 |
| 15:44:18       | 8-JA  | 148.30               | 22.00              | 100                          | -12            | 0.416                 |
| 15:46:18       | 8-JA  | 150.30               | 24.00              | 100                          | -12            | 0.393                 |
| 15:48:18       | 8-JA  | 152.30               | 26.00              | 101                          | -11            | 0.373                 |
| 15:50:18       | 8-JA  | 154.30               | 28.00              | 102                          | -10            | 0.354                 |
| 15:52:18       | 8-JA  | 156.30               | 30.00              | 103                          | -9             | 0.338                 |
| 15:57:18       | 8-JA  | 161.30               | 35.00              | 104                          | -8             | 0.303                 |
| 16: 2:18       | 8-JA  | 166.30               | 40.00              | 105                          | -7             | 0.275                 |
| 16: 7:18       | 8-JA  | 171.30               | 45.00              | 107                          | -5             | 0.252                 |
| 16:12:18       | 8-JA  | 176.30               | 50.00              | 108                          | -4             | 0.232                 |
| 16:17:18       | 8-JA  | 181.30               | 55.00              | 110                          | -2             | 0.215                 |
| 16:22:18       | 8-JA  | 186.30               | 60.00              | 111                          | -1             | 0.201                 |
| 16:27:18       | 8-JA  | 191.30               | 65.00              | 113                          | 1              | 0.188                 |
| 16:32:18       | 8-JA  | 196.30               | 70.00              | 114                          | 2              | 0.177                 |
| 16:37:18       | 8-JA  | 201.30               | 75.00              | 116                          | 4              | 0.168                 |

TEST PHASE : SHUTIN PERIOD # 2  
FINAL FLOW PRESSURE [PSIA] = 112  
PRODUCING TIME [MIN] = 35.32

| TIME<br>OF DAY<br>HH:MM:SS | DATE<br>DD-MM | ELAPSED<br>TIME,MIN | DELTA<br>TIME,MIN | BOT HOLE<br>PRESSURE<br>PSIA | DELTA P<br>PSI | LOG<br>HORNER<br>TIME |
|----------------------------|---------------|---------------------|-------------------|------------------------------|----------------|-----------------------|
| *****                      | *****         | *****               | *****             | *****                        | *****          | *****                 |
| 16:42:18                   | 8-JA          | 206.30              | 80.00             | 117                          | 5              | 0.159                 |
| 16:47:18                   | 8-JA          | 211.30              | 85.00             | 118                          | 6              | 0.151                 |
| 16:52:18                   | 8-JA          | 216.30              | 90.00             | 119                          | 7              | 0.144                 |
| 16:57:18                   | 8-JA          | 221.30              | 95.00             | 120                          | 8              | 0.137                 |
| 17: 2:18                   | 8-JA          | 226.30              | 100.00            | 120                          | 9              | 0.131                 |
| 17: 7:18                   | 8-JA          | 231.30              | 105.00            | 121                          | 10             | 0.126                 |
| 17:12:18                   | 8-JA          | 236.30              | 110.00            | 122                          | 11             | 0.121                 |
| 17:17:18                   | 8-JA          | 241.30              | 115.00            | 124                          | 12             | 0.116                 |
| 17:21:12                   | 8-JA          | 245.20              | 118.90            | 126                          | 14             | 0.113                 |

BEST COPY  
AVAILABLE

Phillips Petroleum Company  
North Flodine Federal 1-25 Well  
San Juan County, Utah  
TTCS File No. 88095

Core No.

1

Interval

5810 - 5870

Formation

Upper Ismay

RECEIVED  
JUN 15 1988

DIVISION OF  
OIL, GAS & MINING

# TerraTek

Geoscience Services

TerraTek Core Services

January 19, 1988

Phillips Petroleum Company  
8055 E. Tufts Ave. Parkway  
Denver, CO 80231

Attn: T.L. Carten

Subject: Core Analysis Data; North Flodine Federal 1-25 Well;  
San Juan County, Utah; TTCS File No. 88095

Diamond coring equipment and water base mud were used in the North Flodine Federal 1-25 Well to obtain 4.0-inch diameter core from the interval and formation listed on the preceding page. A representative of Terra Tek Core Services was at the wellsite to retrieve and box the core. As per the wellsite geologist's instructions, only a five foot interval of the core - 5849.5 to 5854.5 feet - was preserved in Saran film. The core was transported to the Terra Tek laboratory in Salt Lake City, Utah for routine retort and Boyle's law analysis.

A core gamma log was recorded and appears on the enclosed Teklog along with plots of grain density, horizontal permeability, porosity, and residual oil and water saturations.

Analysis was performed once per foot beginning below the anhydrite. Residual fluids were removed and measured using the controlled temperature retort extraction method on 100-gram crushed samples. Porosities were determined for 1.0-inch diameter plug samples using Boyle's law (helium) grain volumes and Archimedes (mercury) bulk volumes. Horizontal permeabilities to nitrogen gas were measured in a Hassler sleeve using an orifice-equipped pressure transducer to monitor downstream flow.

Data resulting from this analysis are tabulated following the Teklog. A data summary is also provided. The zones of the summary are delineated by means of variations in porosity, permeability and fluid saturations. In addition, a porosity versus permeability crossplot is included at the end of this report.

The core was slabbed as instructed. Both the slabs and the butts have been shipped to Phillips Petroleum Company in Denver to the attention of Mr. Jim Anderson.

We appreciate this opportunity to be of service and look forward to working with you again on future projects.

Best regards

*Kevin R. Francis*

Kevin R. Francis  
Data Evaluator

ts/KRF

Final Report Distribution  
Phillips Petroleum Company  
North Flodine Federal 1-25 Well  
San Juan County, Utah  
TTCS File No. 88095

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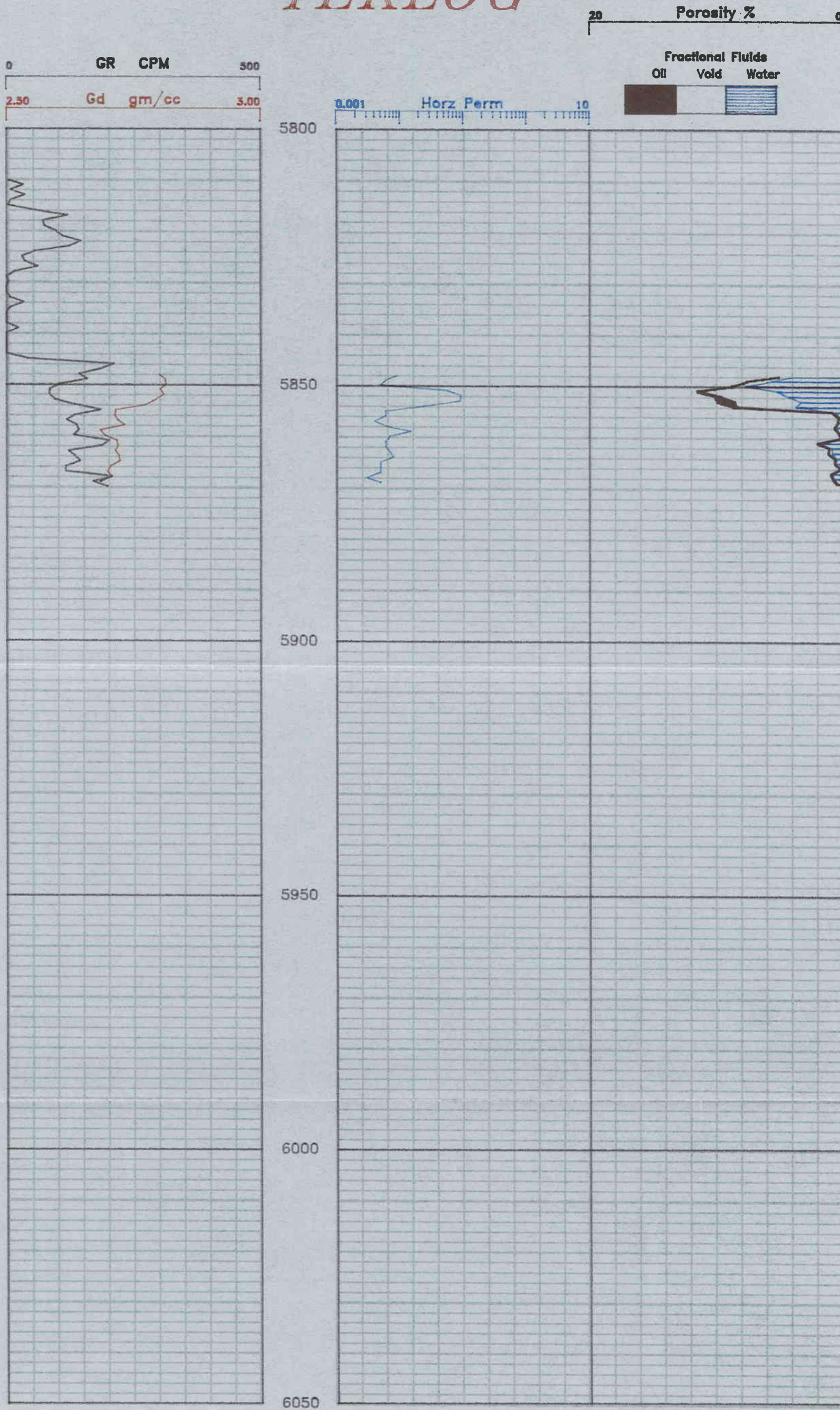
TERRA TEK CORE SERVICES

360 Wakara Way, SLC Utah 84108 (801) 584-2480

PHILLIPS PETROLEUM CO.  
No. Flodine Federal 1-25

TEKLOG

Jan. 18, 1988  
TTCS# 88098



# TerraTek Core Services, Inc.®

University Research Park - 360 Wakara Way - Salt Lake City, Utah 84108 - (801) 584-2480 - TWX 910-925-5284

## PHILLIPS PETROLEUM CO.

|                 |                          |           |                  |              |             |
|-----------------|--------------------------|-----------|------------------|--------------|-------------|
| Well:           | No. Flodine Federal 1-25 | State:    | Utah             | Date:        | 18-JAN-1988 |
| Field:          | Wildcat                  | County:   | San Juan         | TTCS File #: | 88095       |
| Drilling fluid: | N.D. Weighted            | Location: | Sec.25-T39S-R25E | Elevation:   | 5240 GL     |

## RETORT ANALYSIS - BOYLE'S LAW POROSITY

| Sample Number | Depth (feet) | Permeability |           | Porosity % | Saturation |       | Grain Density (gm/cc) | Lithology                         |
|---------------|--------------|--------------|-----------|------------|------------|-------|-----------------------|-----------------------------------|
|               |              | Horz (md)    | Vert (md) |            | Oil %      | H2O % |                       |                                   |
| Upper Ismay   |              |              |           |            |            |       |                       |                                   |
|               | 5810.0-46.5  |              |           |            |            |       |                       | Anhydrite; No analysis per client |
|               | 5846.5-48.0  |              |           |            |            |       |                       | Dol,shy; No analysis per client   |
| 1             | 5848.0-49.0  | <.01         |           | 5.1        | 0.0        | 77.3  | 2.80                  | Dol,vfxl,sl/anh                   |
| 2             | 5849.0-50.0  | <.01         |           | 7.6        | 0.0        | 73.8  | 2.81                  | Dol,vfxl                          |
| 3             | 5850.0-51.0  | <.01         |           | 8.8        | 2.3        | 87.4  | 2.81                  | Dol,vfxl                          |
| 4             | 5851.0-52.0  | .05          |           | 11.5       | 1.1        | 45.1  | 2.80                  | Dol,fxl                           |
| 5             | 5852.0-53.0  | .09          |           | 10.1       | 4.8        | 42.7  | 2.81                  | Dol,fxl                           |
| 6             | 5853.0-54.0  | .09          |           | 9.9        | 14.2       | 33.2  | 2.79                  | Dol,fxl                           |
| 7             | 5854.0-55.0  | .03          |           | 8.8        | 4.4        | 42.6  | 2.77                  | Dol,vf-fxl,halite(?),sl/slt       |
| 8             | 5855.0-56.0  | <.01         |           | 0.8        | 0.0        | 63.6  | 2.71                  | Ls,vfxl,sl/shy                    |
| 9             | 5856.0-57.0  | <.01         |           | 0.4        | 0.0        | 72.2  | 2.71                  | Ls,vfxl,sl/shy                    |
| 10            | 5857.0-58.0  | <.01         |           | 0.4        | 0.0        | 83.4  | 2.72                  | Ls,vfxl,sl/shy                    |
| 11            | 5858.0-59.0  | <.01         |           | 0.7        | 0.0        | 71.5  | 2.73                  | Ls,vfxl,sl/shy,sty,sl/anh         |
| 12            | 5859.0-60.0  | .01          |           | 0.3        | 0.0        | 88.7  | 2.68                  | Dol,mxl,shy,halite(?),frac        |
| 13            | 5860.0-61.0  | <.01         |           | 0.1        | 0.0        | 83.8  | 2.69                  | Ls,vfxl,sl/shy                    |
| 14            | 5861.0-62.0  | <.01         |           | 2.0        | 0.0        | 91.3  | 2.72                  | Ls,fxl,fos                        |
| 15            | 5862.0-63.0  | <.01         |           | 1.1        | 0.0        | 80.6  | 2.72                  | Ls,fxl,fos                        |
| 16            | 5863.0-64.0  | <.01         |           | 1.1        | 0.0        | 72.0  | 2.71                  | Ls,fxl,fos                        |
| 17            | 5864.0-65.0  | <.01         |           | 0.6        | 0.0        | 76.1  | 2.72                  | Ls,fxl,fos                        |
| 18            | 5865.0-66.0  | <.01         |           | 0.6        | 0.0        | 80.8  | 2.72                  | Ls,fxl,fos                        |



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PHILLIPS PETROLEUM CO.

Date: 18-JAN-1988

TTCS File #: 88095

Well: No. Flodine Federal 1-25

## RETORT ANALYSIS - BOYLE'S LAW POROSITY

| Sample<br>Number | Depth<br>(feet) | Permeability |              | Porosity<br>% | Saturation |          | Grain<br>Density<br>(gm/cc) | Lithology          |
|------------------|-----------------|--------------|--------------|---------------|------------|----------|-----------------------------|--------------------|
|                  |                 | Horz<br>(md) | Vert<br>(md) |               | Oil<br>%   | H2O<br>% |                             |                    |
| 19               | 5866.0-67.0     | <.01         |              | 0.2           | 0.0        | 57.2     | 2.70                        | Ls,vfxl,sty        |
| 20               | 5867.0-68.0     | <.01         |              | 1.0           | 0.0        | 87.7     | 2.70                        | Ls,vfxl,clayey     |
| 21               | 5868.0-69.0     | <.01         |              | 0.8           | 0.0        | 82.2     | 2.71                        | Ls,fxl,fos         |
| 22               | 5869.0-70.0     | <.01         |              | 0.4           | 0.0        | 90.0     | 2.68                        | Ls,fxl,sl/slty,sty |

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## PHILLIPS PETROLEUM CO.

|                 |                          |           |                  |              |             |
|-----------------|--------------------------|-----------|------------------|--------------|-------------|
| Well:           | No. Flodine Federal 1-25 | State:    | Utah             | Date:        | 18-JAN-1988 |
| Field:          | Wildcat                  | County:   | San Juan         | ITCS File #: | 88095       |
| Drilling fluid: | N.D. Weighted            | Location: | Sec.25-T39S-R25E | Elevation:   | 5240 GL     |

## RETORT ANALYSIS - BOYLE'S LAW POROSITY DATA SUMMARY

| Zone<br>Number | Depth<br>Interval<br>(feet) | Number<br>of<br>Samples | Permeability    |                 |              | Porosity<br><br>% | Saturation    |                | Grain<br>Density<br>(gm/cc) |
|----------------|-----------------------------|-------------------------|-----------------|-----------------|--------------|-------------------|---------------|----------------|-----------------------------|
|                |                             |                         | Horz<br>(md)    | Horz-90<br>(md) | Vert<br>(md) |                   | Oil<br>%      | H2O<br>%       |                             |
| Upper Ismay    |                             |                         |                 |                 |              |                   |               |                |                             |
| 1              | 5848.0-50.0                 | 2                       | <.01<br>[0.002] |                 |              | 6.3<br>[1.78]     | 0.0<br>[0.00] | 75.6<br>[2.48] | 2.81<br>[0.00]              |
| 2              | 5850.0-51.0                 | 1                       | <.01<br>[0.000] |                 |              | 8.8<br>[0.00]     | 2.3<br>[0.00] | 87.4<br>[0.00] | 2.81<br>[0.00]              |
| 3              | 5851.0-55.0                 | 4                       | .07<br>[0.031]  |                 |              | 10.1<br>[1.13]    | 6.1<br>[5.64] | 40.9<br>[5.27] | 2.79<br>[0.01]              |
| 4              | 5855.0-70.0                 | 15                      | <.01<br>[0.003] |                 |              | 0.7<br>[0.47]     | 0.0<br>[0.00] | 78.7<br>[9.90] | 2.71<br>[0.01]              |

[ ] Sample Standard Deviation

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## HORIZONTAL PERMEABILITY VS POROSITY

### PHILLIPS PETROLEUM CO.

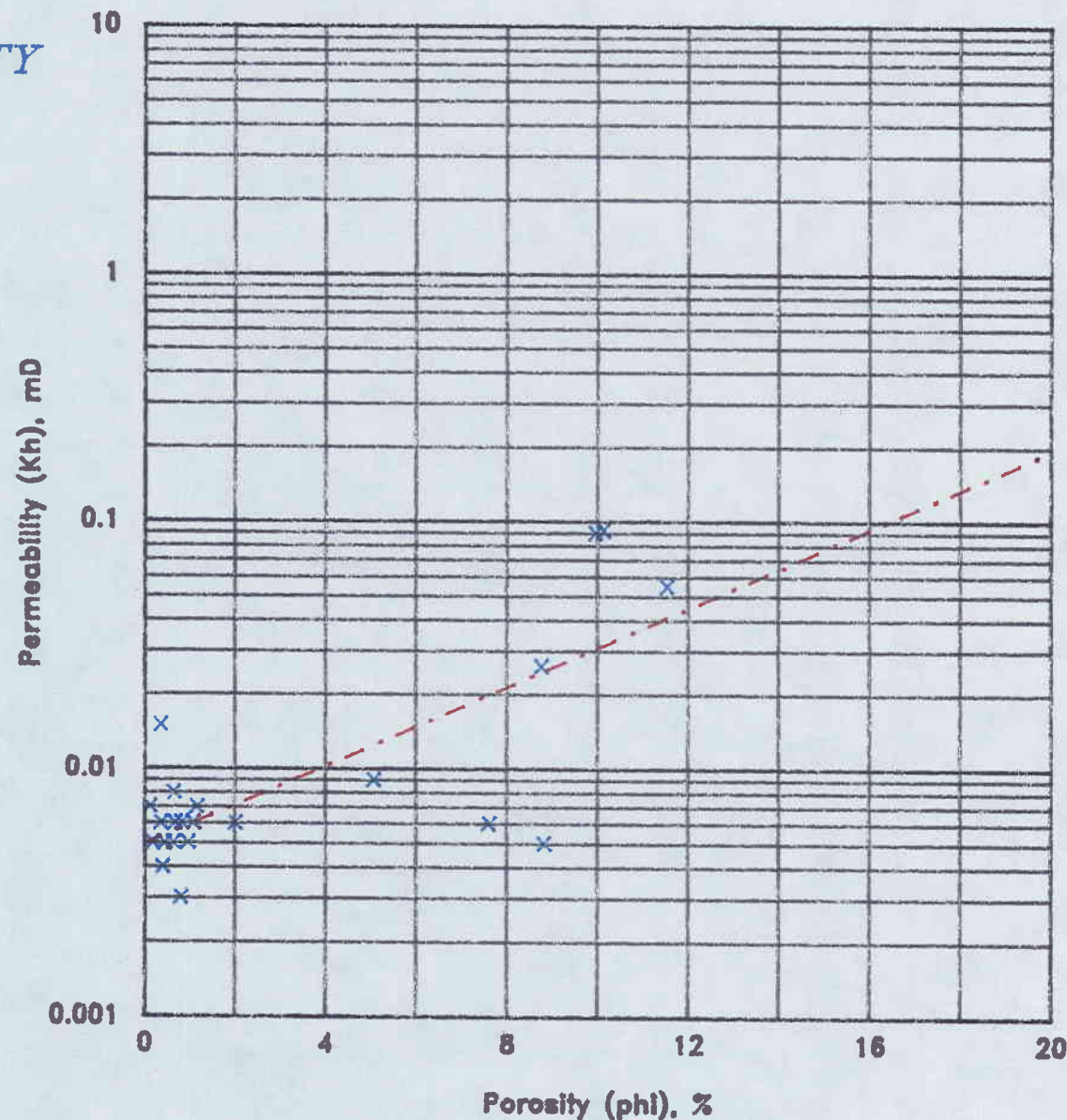
No. Flodine Federal 1-25

Wildcat

San Juan Co., Utah

Jan. 18, 1988

|                                   |        |          |
|-----------------------------------|--------|----------|
| Depth Interval: 5858 to 5869 feet |        |          |
| TTCS# 88095                       |        |          |
| Porosity (phi),                   |        |          |
| Min                               | Max    | Average  |
| 0.122                             | 11.532 | 3.295    |
| Permeability (Kh), mD             |        |          |
| Min                               | Max    | Geo. Ave |
| 0.003                             | 0.092  | 0.009    |
| Equation of the Line              |        |          |
| $\log K_h = a \phi + b$           |        |          |
| $\log K_h = 0.0798 \phi - 2.3067$ |        |          |
| Correlation Coefficient : 0.761   |        |          |
| Upper Ismay                       |        |          |





# PHILLIPS PETROLEUM COMPANY

DENVER, COLORADO 80237-2898  
8055 EAST TUFTS AVENUE PARKWAY, PHONE: 303 850-3000

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**RECEIVED**  
JUN 15 1988

GEOLOGIC WELL REPORT  
PHILLIPS PETROLEUM COMPANY

N. FLODINE FED #1-25

(Sec. 25, T39S-R25E)

SAN JUAN COUNTY, UTAH

4303731369

DIVISION OF  
OIL, GAS & MINING

Report by: J. M. Anderson  
Phillips Petroleum Company  
8055 E. Tufts Avenue Parkway  
Denver, CO 80237  
January 22, 1988

JA288.011

Phillips Petroleum Company  
N. Flodine Fed #1-25

## CONFIDENTIAL INFORMATION

## WELL DATA

---

|                              |                                      |
|------------------------------|--------------------------------------|
| OPERATOR:                    | Phillips Petroleum                   |
| WELL NAME:                   | North Flodine Fed #1-25              |
| LOCATION:                    | NE/NW Sec. 25 T39N-R25E              |
| COUNTY & STATE:              | San Juan County, Utah                |
| ELEVATIONS:                  | 5,233' GL, 5,245' RKB                |
| GEOLOGIST(S):                | J. M. Anderson                       |
| ENGINEER(S):                 | Paul Dean                            |
| DRILLING COMPANY MAN:        | Dean Durrall                         |
| COMMENCED DRILLING:          | December 20, 1987                    |
| CEASED DRILLING:             | January 11, 1988                     |
| DRILLING CONTRACTOR:         | 4 Corners                            |
| TOOL PUSHER(S):              | J. D. Griffith (4 Corners)           |
| DRILLING FLUID:              | Mud/Drispac                          |
| CASING (Size & Depth):       | 13 3/8" @ 103', 9 5/8" @ 2,002'      |
| BITS (Size & Depth):         | See bit record                       |
| SAMPLES (Footage & Depth):   | 2,000' 30'/sample, 5,000' 10'/sample |
| MUD LOGGING CONTRACTOR:      | GEO                                  |
| MUD LOGGER(S):               | John Divine, Bill Krops              |
| WIRELINE LOGGING CONTRACTOR: | Schlumberger                         |
| LOGGING ENGINEER(S):         | Pete Howard                          |
| TOTAL DEPTH:                 | 6,100'                               |
| STATUS:                      | P&A                                  |

Phillips Petroleum Company  
N. Flodine Fed #1-25

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MUD RECORD AT 6:00 A.M.

| <u>DATE</u> | <u>DEPTH</u> | <u>WT.</u> | <u>VIS</u> | <u>PH</u> | <u>WL</u> | <u>CL</u> | <u>CUM COST</u> | <u>COMMENTS</u> |
|-------------|--------------|------------|------------|-----------|-----------|-----------|-----------------|-----------------|
| 12/21/87    | 103'         | -          | Spud       | Mud       |           |           | 860             |                 |
| 12/22/87    | 743'         | 8.5        | 31         | -         | -         | 400       | 1,704           |                 |
| 12/23/87    | 1,643'       | 8.5        | 30         | -         | -         | 400       | 2,246           |                 |
| 12/24/87    | 2,000'       | -          | -          | -         | -         | -         | 2,643           | WOC             |
| 12/27/87    | 2,355'       | 8.9        | 38         | 11.5      | 10        | 800       | 4,182           |                 |
| 12/28/87    | 2,993'       | 9.0        | 36         | 10.5      | 9.8       | 800       | 4,822           |                 |
| 12/29/87    | 3,545'       | 9.4        | 44         | 7.0       | 13.6      | 10,500    | 6,023           |                 |
| 12/30/87    | 3,835'       | 10.0       | 43         | 11.0      | 12.8      | 10,300    | 10,151          |                 |
| 12/31/87    | 4,146'       | 9.8        | 41         | 8.5       | 9.6       | 8,300     | 11,380          |                 |
| 1/1/88      | 4,498'       | 9.8        | 43         | 9.0       | 11.8      | 7,600     | 12,864          |                 |
| 1/2/88      | 4,807'       | 9.8        | 43         | 10.0      | 12.2      | 6,300     | 13,484          |                 |
| 1/3/88      | 5,051'       | 9.7        | 53         | 8.0       | 10.2      | 6,000     | 14,310          |                 |
| 1/4/88      | 5,308'       | 9.7        | 50         | 8.5       | 10.2      | 6,000     | 16,166          |                 |
| 1/5/88      | 5,488'       | 9.7        | 53         | 10.0      | 10.0      | 6,100     | 17,425          |                 |
| 1/6/88      | 5,743'       | 9.7        | 60         | 9.5       | 7.8       | 6,300     | 18,346          |                 |
| 1/7/88      | 5,839'       | 9.7        | 43         | 10.5      | 7.0       | 8,000     | 21,609          |                 |
| 1/8/88      | 5,870'       | 9.7        | 42         | 10.5      | 7.6       | 10,000    | 22,023          |                 |
| 1/8/88      | 5,904'       | 9.6+       | 38         | 10.5      | 8.2       | 10,300    | 19,860          |                 |
| 1/10/88     | 6,041'       | 9.7+       | 44         | 10.5      | 7.2       | 12,300    | --              |                 |
| 1/11/88     | 6,100'       | 9.9        | 53         | 10.0      | 6.8       | 11,700    | 23,597          |                 |

Phillips Petroleum Company  
N. Flodine Fed #1-25

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DEVIATIONS

| <u>MD</u> | <u>TVD</u> | <u>DEGREE</u> | <u>DIRECTION</u> |
|-----------|------------|---------------|------------------|
| 64'       | -          | 1/2           | -                |
| 169'      | -          | 3/4           | -                |
| 258'      | -          | 1/4           | -                |
| 381'      | -          | 1/4           | -                |
| 791'      | -          | 1/2           | -                |
| 1,002'    | -          | 1/4           | -                |
| 1,313'    | -          | 3/4           | -                |
| 1,524'    | -          | 3/4           | -                |
| 1,968'    | -          | 3/4           | -                |
| 2,462'    | -          | 1/2           | -                |
| 2,966'    | -          | 3/4           | -                |
| 3,450'    | -          | 3/4           | -                |
| 3,999'    | -          | 3/4           | -                |
| 4,517'    | -          | 1/2           | -                |
| 5,026'    | -          | 3/4           | -                |
| 5,368'    | -          | 1/2           | -                |
| 5,810'    | -          | 1/2           | -                |

Phillips Petroleum Company  
N. Flodine Fed #1-25

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WELL HISTORY AT 6:00 A.M.

Give hourly breakdown for testing, coring and logging or as activity dictates.

| <u>DATE</u> | <u>TIME</u> | <u>DEPTH</u> | <u>OPERATION</u>                 |
|-------------|-------------|--------------|----------------------------------|
| 12/18/87    | -           | 0'           | WORT                             |
| 12/19/87    | -           | 0'           | WORT & snow on roads             |
| 12/20/87    | -           | 0'           | WORT, spud well at 23:00         |
| 12/21/87    | -           | 103'         | Run conductor 13 3/8" @ 103'     |
| 12/22/87    | -           | 700'         | Drlg & WOC                       |
| 12/23/87    | -           | 1,660'       | Drlg                             |
| 12/24/87    | -           | 2,002'       | Run 9 5/8" surface csg. @ 2,002' |
| 12/25/87    | -           | 2,002'       | SD for holiday                   |
| 12/26/87    | -           | 2,002'       | A/A                              |
| 12/27/87    | -           | 2,397'       | Drlg, GEO mudloggers on loc      |
| 12/28/87    | -           | 3,053'       | Drlg                             |
| 12/29/87    | -           | 3,580'       | Drlg                             |
| 12/30/87    | -           | 3,863'       | Drlg                             |
| 12/31/87    | -           | 4,175'       | Drlg                             |
| 1/1/88      | -           | 4,504'       | Drlg                             |
| 1/2/88      | -           | 4,813'       | Drlg                             |
| 1/3/88      | -           | 5,063'       | Drlg                             |
| 1/4/88      | -           | 5,334'       | Drlg                             |
| 1/5/88      | -           | 5,465'       | Drlg                             |
| 1/6/88      | -           | 5,772'       | Drlg                             |
| 1/7/88      | -           | 5,845'       | Drlg & coring Upper Ismay        |
| 1/8/88      | -           | 5,870'       | Running DST 1 Upper Ismay        |
| 1/9/88      | -           | 5,931'       | Drlg                             |
| 1/10/88     | -           | 6,041'       | Running DST 2 Lower Desert Crk   |
| 1/11/88     | -           | 6,100'       | TD=6,100' & logging              |
| 1/12/88     | -           | 6,100'       | P&A                              |



Phillips Petroleum Company  
N. Flodine Fed #1-25

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BIT RECORD

| <u>NO.</u> | <u>MFGR</u> | <u>SIZE</u> | <u>TYPE</u> | <u>SERIAL<br/>NUMBER</u> | <u>DEPTH<br/>OUT</u> | <u>FOOTAGE</u> | <u>HRS<br/>RUN</u> | <u>1000#<br/>WT.</u> | <u>RPM</u> | <u>PUMP<br/>PSI</u> |
|------------|-------------|-------------|-------------|--------------------------|----------------------|----------------|--------------------|----------------------|------------|---------------------|
| 1.         | HTC         | 17 1/2"     | R1          | Retip                    | 103'                 | 91'            | 5                  | -                    | -          | -                   |
| 2.         | HTC         | 12 1/4"     | ATJ22       | HL297RR                  | 1,421'               | 1,318'         | 29.5               | 40                   | 80         | 1,400               |
| 3.         | STC         | 12 1/4"     | F3          | CK2200                   | 2,002'               | 581'           | 13.75              | 45                   | 75         | 1,600               |
| 4.         | STC         | 8 3/4"      | F27         | KE2584                   | 3,771'               | 1,857'         | 71.25              | 40                   | 70         | 1,850               |
| 5.         | STC         | 8 3/4"      | F3          | KC0423                   | 5,368'               | 1,597'         | 125.5              | 45                   | 70         | 1,850               |
| 6.         | V           | 8 3/4"      | V5S7C       | 15145                    | 5,810'               | 442'           | 36                 | 40                   | 60         | 1,850               |
| Chr        |             |             |             |                          |                      |                |                    |                      |            |                     |
| 7.         | Core Bit    | 8 1/2"      | C201        | SW8818                   | 5,870'               | 60'            | 19.5               | 20/25                | 60         | 750                 |
| 6R.        | V           | 8 3/4"      | V5S7C       | 15145                    | 6,100'               | 230'           | 57.75              | 42                   | 60         | -                   |

Phillips Petroleum Company  
N. Flodine Fed #1-25

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FORMATION TOPS

|                       |                     |     |                   |      |               |
|-----------------------|---------------------|-----|-------------------|------|---------------|
| GL:                   | 5,233'              | KB: |                   | RKB: | 5,245'        |
| <u>FORMATION NAME</u> | <u>ELECTRIC LOG</u> |     | <u>DATUM (SL)</u> |      | <u>SAMPLE</u> |
| Shinarump             | 2,799'              |     | 2,446'            |      | -             |
| De Chelly             | 2,996'              |     | 2,249'            |      | -             |
| Hermosa               | 4,802'              |     | 443'              |      | -             |
| Upper Ismay           | 5,737'              |     | -492'             |      | 5,740'        |
| Hovenweep Sh          | 5,864'              |     | -619'             |      | 5,892'        |
| Lower Ismay           | 5,867'              |     | -622'             |      | 5,895'        |
| Gothic Sh             | 5,926'              |     | -681'             |      | 5,918'        |
| Upper Desert Crk      | 5,947'              |     | -702'             |      | 5,960'        |
| Lower Desert Crk      | 5,995'              |     | -750'             |      | -             |
| Chimney Rock Sh       | 6,040'              |     | -795'             |      | 6,040'        |
| Akah                  | 6,060'              |     | -815'             |      | 6,070'        |
| TD                    | 6,100'              |     | -855'             |      |               |

Phillips Petroleum Company  
N. Flodine Fed #1-25

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ELECTRIC LOG CALCULATIONS CPI ANALYSIS

| <u>Formation</u> | <u>Depth</u> | <u>RW</u> | <u>RT</u> | <u>Neut.<br/>Poro.</u> | <u>Dens.<br/>Poro.</u> | <u>Avg.<br/>Poro.</u> | <u>Sonic<br/>Poro.</u> | <u>SW</u> | <u>Remarks</u>  |
|------------------|--------------|-----------|-----------|------------------------|------------------------|-----------------------|------------------------|-----------|-----------------|
| Upper Ismay      | 5,846.5'     | -         | -         | -                      | -                      | 7.6                   | -                      | 61.5      | No permeability |
|                  | 5,847'       | -         | -         | -                      | -                      | 9.7                   | -                      | 50.2      | No permeability |
|                  | 5,847.5'     | -         | -         | -                      | -                      | 10.1                  | -                      | 50.5      | No permeability |
| Lower Desert Crk | 6,019'       | -         | -         | -                      | -                      | 8.4                   | -                      | 57.8      | No permeability |
|                  | 6,019.5'     | -         | -         | -                      | -                      | 9.4                   | -                      | 49.8      | No permeability |
|                  | 6,020'       | -         | -         | -                      | -                      | 10.9                  | -                      | 48.3      | No permeability |
|                  | 6,020.5      | -         | -         | -                      | -                      | 10.6                  | -                      | 55.3      | No permeability |
|                  | 6,021'       | -         | -         | -                      | -                      | 14.4                  | -                      | 41.1      | No permeability |

Rw=.035 at 134°F

Matrix: RHOB=2.8, Delta - T=43, Desert Crk is sucrosic dolomite

A=1, M=2, N=2

Porosity from Density-Neutron unless Delta-RHO >  $\pm .1$ , then sonic porosity is used.

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# DRILL STEM TEST

DST #1

FM. Upper Ismay

Test Interval 5,846 - 5,870'

|   | TOP RECORDER | MIDDLE RECORDER | BOTTOM RECORDER |
|---|--------------|-----------------|-----------------|
| Depth   | 5,797'       | 5,815'          | 5,852'          |
| Initial Hydrostatic (IH)                          |              | 2,945           | 2,965           |
| Initial Flow (IF <sub>1</sub> )                   |              | 75              | 76              |
| Final Initial Flow (FF <sub>1</sub> )             |              | 85              | 86              |
| Initial Shut-In (SIP <sub>1</sub> ) <sup>1</sup>  |              | 133             | 134             |
| Second Initial Flow (IF <sub>2</sub> )            |              | 85              | 86              |
| Second Final Flow (FF <sub>2</sub> ) <sup>2</sup> |              | 85              | 86              |
| Second Shut-In (FSI <sub>2</sub> ) <sup>2</sup>   |              | 103             | 105             |
| Final Hydrostatic (FH)                            |              | 2,945           | 2,965           |
| Temperature                                       | 122°         |                 | 122°            |

## TIMES IN MINUTES:

## BLOW DESCRIPTION

|                             |     |  |
|-----------------------------|-----|--|
| Flow #1                     | 5   | Immediate very weak, but steady surface blow, no gas |
| Shut-In #1                  | 90  | -  |
| Flow #2                     | 30  | Dead, no blow  |
| Shut-In #2                  | 120 | -  |
| -3 pipe fluid samples taken |     |  |
| -200 water cushion          |     |  |

BH SAMPLER: Total Vol. Sampler: 2,500 cc. Total Vol. Recovered 2400 cc.  
Sample Description: 2,400 cc. mud & .014 CFG at 30 psi

PIPE RECOVERY 182' W Cush, 25' Mud (12,000 ppm C1<sup>-</sup>, Rm=.39 @ 78°F)

REMARKS - top packer = 5,840'  
- good mechanical test

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# DRILL STEM TEST

DST #2                      FM. Lower Desert Crk                      Test Interval 5,980 - 6,040'

|  | TOP RECORDER | MIDDLE RECORDER | BOTTOM RECORDER |
|--|--------------|-----------------|-----------------|
| Depth                                  | 5,950'       | 5,974'          | 5,985'          |
| Initial Hydrostatic (IH)               |              | 3,102           | 3,165           |
| Initial Flow (IF <sub>1</sub> )        | 68           | 89              | 96              |
| Final Initial Flow (FF <sub>1</sub> )  | 68           | 89              | 96              |
| Initial Shut-In (SIP <sub>1</sub> )    |              | 409             | 429             |
| Second Initial Flow (IF <sub>2</sub> ) |              | 89              | 105             |
| Second Final Flow (FF <sub>2</sub> )   |              | 89              | 105             |
| Second Shut-In (FSI <sub>2</sub> )     |              | 710             | 734             |
| Final Hydrostatic (FH)                 |              | 3,130           | 3,146           |
| Temperature                            | -            | -               | -               |

## TIMES IN MINUTES:

## BLOW DESCRIPTION

|  |     |  |
|--|-----|--|
| Flow #1  | 5   | Immediate 1" blow increasing to 2", no gas                         |
| Shut-In #1   | 90  | -  |
| Flow #2  | 60  | Immediate 3" blow increasing to 1/2 psi & decreasing to 3", no gas |
| Shut-In #2   | 180 | -  |
| -good blow throughout 2nd flow period              |     |  |
| -3 pipe fluid samples taken: top = Rw = 2.4 @ 60°F |     |  |
| middle = Rw = 6.5 @ 60°F                           |     |  |
| bottom = Rw = .4 @ 60°F                            |     |  |
| -200' Water cushion                                |     |  |

BH SAMPLER: Total Vol. Sampler: 2,500 cc., Total Vol. Recovered: No fluid,  
Sample Description: 11.2 CFG at 140 psi

PIPE RECOVERY 37.8' Mud, 156' W Cush

REMARKS Had planned 200' Water cushion, but recovery was short. No pressure on pipe. After pulling 4,900' pipe faint gas fumes were observed. No liquid HC's recovered. DST #2 tested Lower Desert Crk drilling break & gas show 6,028-35'.

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| DEPTH | SAMPLE DESCRIPTIONS - ZONE OF INTEREST ONLY |
|-------|---|
|-------|---|

All depths are based on log depths

|                    |   |
|--------------------|---|
| 5,788 - 5,840'     | Upper Ismay (Substage III) - <u>Anhydrite</u> : light dark gray, white, crystalline, hard, nodular & "chicken wire" textures. NSFOC   |
| 5,840 - 5,850'     | Upper Ismay (Substage II & I) - <u>Shale</u> : black, dark gray, sooty - silky luster, very finely micaceous, splintery, slity in part, dolomitic, carbonaceous, nodular anhydrite, slightly fossiliferous, grades downward into dolomite.<br><br><u>Dolomite</u> : dark gray, black, microsucrosic, argillaceous, thin carbonaceous laminations, occasional healed tight breccia, large rounded clasts of black chert replacing anhydrite, grades down into dolomite, tight, NSFOC |
| 5,850 - 5,864'     | Upper Ismay (Substage II & I) - <u>Limestone</u> : black, dark gray, sucrosic, grades down into coarsely crystalline, abundant fossils (crinoids, forams, shell hash), argillaceous, dolomitic, tight, slightly anhydritic.   |
| 5,851.5 - 5,853.5' | Some very poor intercrystalline $\emptyset$ , faint light brown stain, patchy moderate bright light yellow-green fluorescence, fair-good fast streaming light yellow cut, bright light yellow-green residual ring, slight odor  |
| 5,853.5 - 5,854.5' | A/A, good, fast streaming cut, slight-moderate odor   |
| 5,854.5 - 5,855.5' | Some very poor intercrystalline $\emptyset$ , patchy faint light yellow fluorescence, faint light yellow slow streaming cut   |
| 5,864 - 5,867'     | Upper Ismay (Hovenweep Shale)   |

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| DEPTH          | SAMPLE DESCRIPTIONS - ZONE OF INTEREST ONLY   |
|----------------|---|
| 5,960 - 5,982' | Upper Desert Creek - <u>Anhydrite</u> : white, translucent, massive, soft-firm, crystalline in part, occasional mineral fluorescence, NSFOC   |
| 5,982 - 5,995' | Upper Desert Creek<br><br><u>Dolomite</u> : tan, light gray, firm-moderately hard, micro-cryptocrystalline, occasionally argillaceous, limey, tight, NSFOC<br><br><u>Shale</u> : black, dark-medium gray, silky luster, slightly-moderately calcareous, dolomitic, micaceous, anhydritic, carbonaceous, soft-moderately firm, subblocky-splintery, NSFOC  |
| 5,995 - 5,999' | Lower Desert Creek -<br><br><u>Dolomite</u> : A/A<br><u>Shale</u> : A/A   |
| 5,999 - 6,016' | Lower Desert Creek -<br><u>Anhydrite</u> : A/A<br><u>Dolomite</u> : light-medium gray, occasional dark gray, sucrosic-grainy, calcareous, soft-moderately firm, argillaceous, poorly indurated in part, poor $\emptyset$ , NSFOC<br><u>Limestone</u> : black, dark-light gray, sucrosic-grainy-crystalline, argillaceous, dolomitic, anhydritic, dense, carbonaceous, micaceous, tight, NSFOC                             |
| 6,016 - 6,040' | Lower Desert Creek -<br><u>Dolomite</u> : light gray, occasional light tan, firm-occasionally hard, micro-cryptocrystalline, some sucrosic texture, slightly argillaceous, trace chert, occasional very poor intercrystalline $\emptyset$ , occasional faint light brown oil stain, some faint light yellow-green fluorescence, trace poor-faint light yellow streaming cut.<br><u>Limestone</u> : A/A <u>Shale</u> : A/A |
| 6,040 - 6,050' | Chimney Rock Shale  |